ARCTOMYS. MARMOT.

Generic Character.

Dentes Primores cuneati, duo in utraque maxilla.	*Front-teeth* two in each jaw, strong, sharp, and cuneated.
Molares superiores utrinque quinque, inferiores quatuor.	*Grinders* in the upper jaw five on each side, in the lower jaw four.
Claviculæ perfectæ.	*Clavicles* or collar-bones in the skeleton.

THE genus *Arctomys* or *Marmot* differs from that of *Mus* in so few particulars as to make it somewhat doubtful whether it ought to be kept separate or not. These animals are of a thick form, with large, roundish, and somewhat flattened heads, small mouths, the fissure having a somewhat perpendicular appearance; ears very short, and sometimes none; a short villous tail; tetradactyle fore-feet with a very small thumb, and pentadactyle hind-feet: the skeleton is furnished with clavicles or collar-bones; and the cæcum or appendicular intestine is very large. They are diurnal animals; feed on roots, grain, &c. which they often collect into heaps. They reside in subterraneous holes or burrows, and sleep during the winter.

MARYLAND MARMOT

ALPINE MARMOT.

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ALPINE MARMOT.

Arctomys Marmota. *A. capite auriculato, corpore fusco subtus rufescente. Lin. Syst. Nat. Gmel. p.* 141.
Brown Marmot, rufous beneath.
Mus Marmota. *M. cauda abbreviata subpilosa, auriculis rotundatis, buccis gibbis. Lin. Syst. Nat. p.* 81.
Mus Alpinus. *Gesn. Quadr. p.* 743. *Aldr. dig. p.* 445.
La Marmotte. *Buff.* 8. *p.* 219. *pl.* 28.
Alpine Marmot. *Pennant Quadr.* 2. *p.* 128.

THIS species is a native of the Alps and of the Pyrenean mountains, and is most frequent in those of Savoy and Swisserland, inhabiting the higher regions, and feeding on various roots, plants, insects, &c. It climbs readily, and can ascend the rocky eminences and fissures with great facility. Its general size is somewhat larger than that of a rabbet; measuring about sixteen inches to the tail, which is about six inches long. The colour of the Marmot, on the upper parts, is a brownish or rather tawny ash-colour; the legs and under parts being of a bright tawny or ferruginous tinge: the head is rather large, and flattish; the ears short and hid in the fur, and the tail thick and bushy. The account of this species, as given by Gesner, and copied by Buffon and others, with the addition of a few particulars, will be sufficient for its general history. It is an animal which delights in the regions of frost and snow, and is found only on the tops of high mountains. In such situations several individuals unite in forming a place of retreat, which

is contrived with great art, and consists of an oval cavity or general receptacle, large enough to contain several of the animals, and having a large canal or passage, which divaricates in such a manner as to present two outlets to the surface of the ground. These recesses are prepared on the declivities of elevated spots, and the cavern or receptacle is well lined with moss and hay which they prepare during summer, as if conscious of the necessity of providing for their long hybernal sleep. In fine weather they are seen sporting about the neighbourhood of their burrows; and delight in basking in the sunshine; frequently assuming an upright posture, sitting on their hind-feet. When assembled in this manner, it is observed, that one of the exterior number seems to act as a centinel, and on the approach of any danger, alarms the fraternity by a loud and shrill whistle, on which they instantly retire to their cavern. These animals make no provision for winter; but as soon as the autumnal frosts commence, they carefully stop up the entrances to their mansions, and gradually fall into a state of torpidity, in which they continue till the arrival of spring, when they again awake, and re-commence their excursions. Before they retire to their winter quarters they are observed to grow excessively fat; and, on the contrary, appear greatly emaciated on first emerging from them. If carefully dug up during the winter, from their holes, they may be conveyed away in their sleeping state; and when brought into a warm cham-

ber, gradually awaken, nearly in the same manner as the Hamster. If kept in a warm situation, they do not become torpid in winter. They breed early in the summer, and the litter commonly consists of three or four, the growth of which is observed to be very rapid.

When taken young, the Marmot may be easily rendered domestic, and is often taught to perform various gesticulations. In a domestic state it will also eat almost any kind of animal or vegetable food, and is extremely fond of milk. In feeding it generally sits in an upright position, making use of its paws in the manner of a squirrel.

MARYLAND MARMOT.

Arctomys Monax. *A. capite auriculato, roſtro cærulescente, cauda longiuscula villosa, corpore griseo. Lin. Syst. Nat. Gmel. p.* 142.

Ferruginous-brown Marmot, with blueish-grey snout and longish villose tail.

Mus Monax. *M. cauda mediocri pilosa, corpore cinereo, auriculis subrotundis, palmis tetradactylis, plantis pentadactylis. Lin. Syst. Nat. p.* 81.

The Monax, or Marmot of America. *Edw.* 104. *Buff. suppl.* 3. *p.* 157. *pl.* 28.

Maryland Marmot. *Pennant Quadr.* 2. *p.* 130.

THE Maryland Marmot is a North American animal, and is principally found in Virginia and Pensylvania. It also occurs in the Bahama islands; and in its way of life resembles the European or Alpine Marmot, living on vegetable substances,

retiring into hollows under the roots of trees, &c. in winter, and falling into temporary state of torpidity: it is doubtful, however, whether this is the case in those which are found in the Bahama islands. The size of this species is nearly that of the rabbet: its colour is a ferruginous brown above, and paler or inclining to whitish beneath: the muzzle, as far as the eyes, is of a pale blueish ash-colour; the ears are short and rounded; the eyes are rather large and black, and the snout sharpish: the tail is longer than in others of this genus, being nearly half the length of the body, and covered with longish or rather bushy hair of a deep brown or blackish colour: the feet are blackish, and are furnished with large and sharp claws. A good figure of this animal has been given by Edwards, from a specimen which was long kept in a domestic state by Sir Hans Sloane. Edwards informs us, that "by being fed with soft meats, and disuse to gnaw, its teeth grew so long and crooked that it could not take its food, so to preserve its life they were obliged to break them out." This elongation of the teeth in various animals, when kept in similar circumstances, is a well-known occurrence, having been observed in rabbets, squirrels, &c.

QUEBEC MARMOT.

Arctomys Empetra. *A. capite auriculato, cauda villosa, corpore supra vario subtus rufo. Lin. Syst. Nat. Gmel. p.* 143.
Grey Marmot, undulated with darker and lighter variegations, rufous beneath, with dusky tail.
Mus Empetra. *M. capite gibbo auriculato, cauda villosa brevi, palmis tetradactylis, corpore supra vario, subtus rufo. Pall. Glir. p.* 75.
Quebec Marmot. *Pennant Quadr. 2. p.* 129.

THE Quebec Marmot is said to be found in various parts of North America, but it appears to be most frequent in Hudson's Bay and Canada. Its size is that of a rabbet, or rather larger, and its colour is brown on the upper parts, undulated with whitish or pale grey, the tips of the hairs being of that colour: the legs and under parts of the body are rufous or ferruginous: the face is dusky; the nose black and obtuse, the cheeks grey, and the tail short and dusky, especially at the tip. In its manners it is supposed to resemble the rest of its congeners.

BOBAC.

Arctomys Bobac. *A. capite auriculato, cauda villosa, palmarum ungue pollicari, corpore griseo subtus luteo. Lin. Syst. Nat. Gmel. p.* 143.

Grey Marmot, rufous beneath, with a thumb-claw on the fore feet.

Mus Arctomys. *Pall. Glir. p.* 75. *t.* 18.

Le Boback. *Buff.* 13. *p.* 136. *pl.* 18.

Bobak Marmot. *Pennant Quadr.* 2. *p.* 131.

The Bobac is of the size of the Alpine Marmot, and, according to Dr Pallas, is a native of "the high, but milder and sunny sides of mountainous countries, which abound with fissile or free-stone rocks, where it is found in dry situations, and such as are full of springs, woods, or sand. It abounds in Poland and Russia, among the Carpathian hills: it swarms in the Ukraine, about the Boristhenes, especially between the Sula and Supoy; and again between the Boristhenes and the Don, and along the range of hills which extend to the Volga. It is found about the Yaik and the neighbouring rivers: inhabits the southern desert in great Tartary, and the Altaic mountains, east of the Irtis. It ceases to appear in Siberia, on account of its northern situation, but is found again beyond lake Baikal, and about the river Argun and lake Dalay; in the sunny mountains about the Lena; and very frequently in Kamtschatka, but rarely reaches as high as lat. 55."

The colour of the Bobac is grey above, with the throat, insides of the limbs, and under parts

of the body, fulvous or ferruginous; the tail is short, rather slender, and full of hair. Its manner of life extremely resembles that of the common or Alpine Marmot, with which, indeed, it appears to have been sometimes confounded by naturalists. The holes or receptacles of these animals are lined with the finest hay, and it is said that the quantity found in one nest is sufficient for a night's provender for a horse. They are fond of sporting about in the sunshine near their holes, like the common Marmot, set up a similar whistle when disturbed, and retire with precipitation to their receptacle. They may be easily rendered domestic, like that species, and are of a mild and gentle disposition. In winter they lie torpid, unless kept in warm rooms. They breed early in the spring, and are said to produce six or eight young.

HOARY MARMOT.

Arctomys Pruinosa. *A. capite auriculato, cauda pedibusque nigris, dorsi, laterum et abdominis pilis duris longis, basi cinereis, medio nigris, apice albidis. Lin. Syst. Nat. Gmel. p.* 144.
Hoary Marmot, with black legs and tail.
Hoary Marmot. *Pennant Quadr.* 2. *p.* 144.

This species was first described by Mr. Pennant, from a specimen in the Leverian Museum. It is about the size of the *Monax*, or Maryland Marmot, and is of a hoary ash-colour, the hair, which is long and rather coarse, being cinereous

at the roots, black in the middle, and white at the tips: the tip of the nose, legs, and tail, are black: the cheeks whitish, and the top of the head dusky with a ferruginous cast. It is a native of North America.

MAULINE MARMOT.

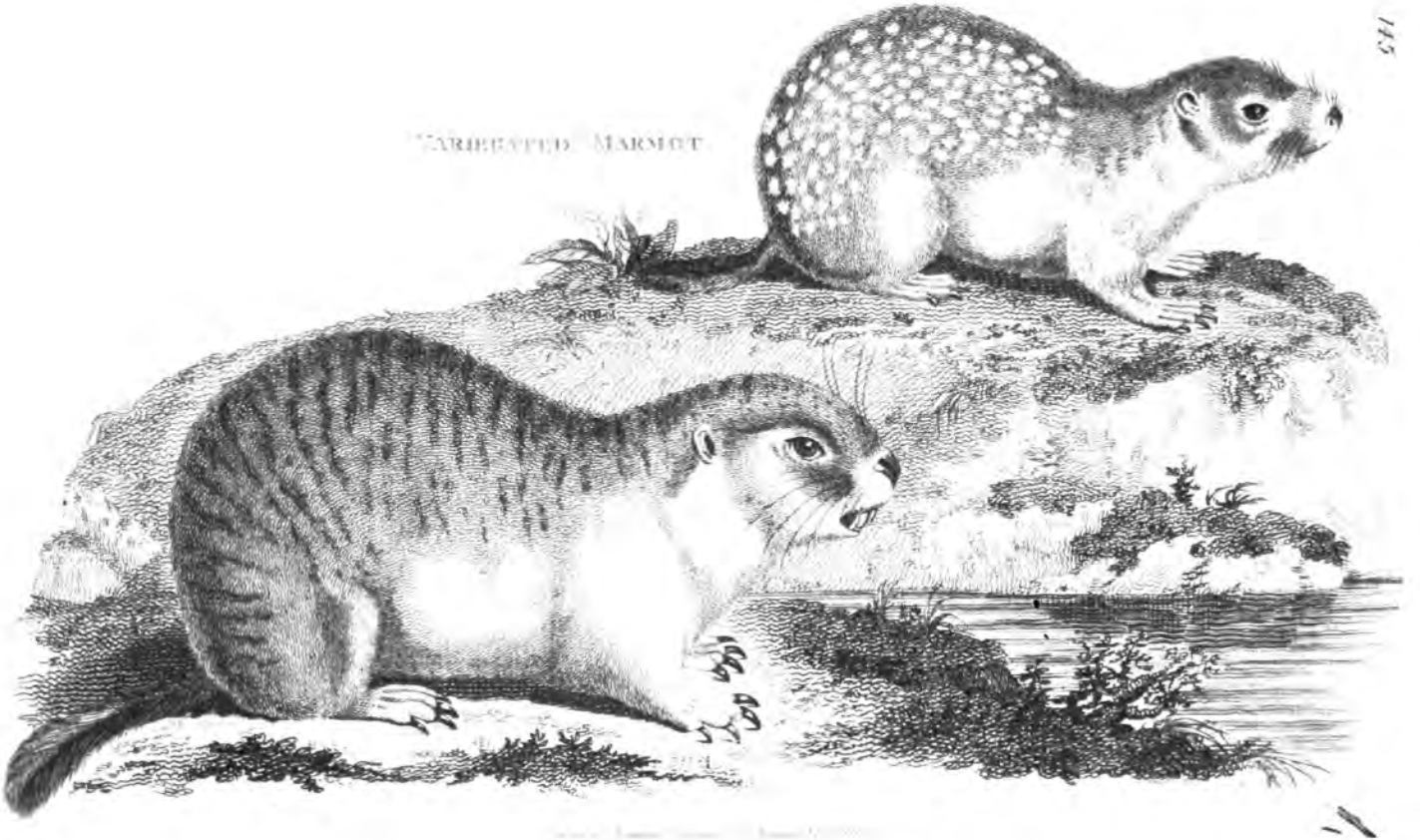
Arctomys Maulina. *A. cauda mediocri pilosa, auriculis acuminatis, pedibus pentadactylis.*

Marmot, with tail of middling length, sharp-pointed ears, and pentadactyle feet.

Mus Maulinus. *Lin. Syst. Nat. Gmel. p.* 137. *Molin. Hist. Chil. p.* 268.

Mauline Marmot. *Pennant Quadr.* 2. *p.* 135.

This animal was discovered by Molina in the province of Maule, in Chili, where it inhabits woods. It is said to be about twice the size of the common or Alpine Marmot, nearly of the same colour, but has pointed ears, lengthened nose, four rows of whiskers, and a longer tail than the common Marmot. On each foot are also said to be five toes. It is represented as a strong animal, and not easily conquered by dogs which happen to attack it.


CARIBBEAN MARMOT

GUNDI MARMOT.

Arctomys Gundi. *A. capite auriculato, corpore teſtaceo rufescente. Lin. Syst. Nat. Gmel. p.* 145.
Reddish Marmot, with abruptly terminated ears.
Gundi Marmot. *Pennant Quadr.* 2. *p.* 145.

THIS species is a native of Barbary, towards Mount Atlas, near Masuffin, and was first described by a Mr. Rothman, a Swede. It is about the size of a small rabbet, and is entirely of a testaceous red colour: the ears are truncated, with large apertures; the tail short, the upper teeth truncated, and the lower slender and pointed. It is called by the Arabs *Gundi*. Its particular history seems as yet to be not fully understood.

VARIEGATED MARMOT.

Arctomys Citillus. *A. auriculis nullis, cauda villosa, corpore vario. Lin. Syst. Nat. Gmel. p.* 144. *Schreb. saeugth.* 4. *p.* 746. *t.* 211. A. B.
Mus Citillus. *M. capite gibbo, auriculis nullis, cauda brevi villosa, corpore vario. Pall. Glir. p.* 76. *and p.* 119.
Variegated earless Marmot, with villous tail.
Le Zizel. *Buff.* 15. *p.* 139. *and Le Souslik. p.* 144. *and Suppl.* 3. *p.* 191. *pl.* 31.
Earless Marmot. *Pennant Quadr.* 2. *p.* 145

OF all the Marmots this is the most elegant in its appearance, exhibiting generally a beautiful

variegation of yellowish-brown and white, the former constituting the ground colour, and the latter the variegations, which are sometimes in the form of spots, and sometimes of transverse undulations: the legs and under parts of the body are of a yellowish white: the tail is short, but well covered with hair, and is brown above and ferruginous beneath: there is scarce any appearance of external ears, but merely an edging to the auditory canal. The length of the animal is about a foot, and of the tail four inches and a half; but this species varies as much in size as in colours, and we are assured by Dr. Pallas, that some of the varieties are scarce larger than a water rat, while others are nearly equal in size to the Alpine Marmot.

The Variegated Marmot inhabits Bohemia, Austria, Hungary, and from the banks of the Volga to India and Persia; through Siberia and Great Tartary, to Kamtschatka; some of the intervening isles, and even the continent of America. It is sometimes found in woods, but seems principally to delight in dry hilly places, where the herbage is of short growth. They form subterraneous burrows, in which they deposit heaps of grain, roots, nuts, &c. for their winter food; for it does not appear that they sleep during that period, like some others of this genus: at least we are assured by Dr. Pallas, that those which occasionally inhabit granaries are seen in motion during the winter season. They breed in the spring, and produce from five to eight at a time. They

are sometimes seen in considerable numbers basking near the entrances of their holes, and when disturbed utter the same kind of shrill whistle as the common Marmot. They are said to be very irascible and quarrelsome among themselves; and their bite is very severe. They feed not only on vegetable but also on animal food, and are observed to destroy small birds and other animals. Notwithstanding their native wildness, hardly any animal is more easily tamed. Even those which are full grown, will grow tolerably familiar in the space of a single day. The females, however, which are fiercer than the males, are much less readily tamed, especially if taken at an advanced age. They are of an extremely cleanly disposition, and, after feeding, generally wash their faces in the manner of cats, and clean their fur with the greatest diligence. Dr. Pallas kept several for a considerable time, and had thus an opportunity of observing with peculiar exactness their habits and manner of life: like other domestic animals, they were fond of being caressed, and would readily feed from the hand: their sleep was extremely profound, and commenced very early in the evening, continuing during the whole night; and even during a good part of the day, if the weather happened to be cold or rainy.

SCIURUS. SQUIRREL.

Generic Character.

Dentes Primores superiores cuneati, inferiores acuti.
Molares ad utrumque latus superiores quinque, inferiores quatuor.
Clavicula perfectæ.
Cauda disticha.

Upper front-teeth cuneated, lower sharp.
Grinders in the upper jaw five on each side, in the lower four.
Clavicles in the skeleton.
Tail (in most species) spreading towards each side.

THE animals composing this elegant genus are remarkable for the liveliness of their disposition, the celerity of their motions, and the general beauty and neatness of their appearance. They inhabit woods, live entirely on vegetable food, and take up their residence in the hollows of trees, where they prepare their nests. Some species are furnished with an expansile lateral skin, reaching from the fore legs to the hind; by the help of which they are enabled to spring to a greater distance than the rest of the genus, and to transport themselves occasionally from tree to tree; but this momentary support in air is all that they are capable of, and though called, from this circumstance, *flying squirrels*, they are unable to

GREAT SQUIRREL.

continue that action in the manner of bats. The species of Squirrels enumerated in the twelfth edition of the Systema Naturæ of Linnæus amounted to no more than eleven; but such has been the spirit of research among modern naturalists, that the number is now increased to near thirty.

GREAT SQUIRREL.

Sciurus Maximus. *S. ferrugineus, subtus flavescens, artubus extus caudaque nigris.*

Ferruginous Squirrel, yellowish beneath, with the outsides of the limbs and tail black.

Sciurus maximus. *Lin. Syst. Nat. Gmel. p.* 149.

Le grand Ecureuil de la côte de Malabar. *Sonnerat, Voy.* 2. *p.* 139. *pl.* 87.

Of all the species yet discovered, this is the largest, being equal in size to a cat. It is a native of India, and was first described by Mons. Sonnerat, who informs us that it is found in the Malabar country, and especially about the mountains of Cardamone, where it feeds on fruits, and is particularly fond of the milk of the cocoa-nut, which it pierces, when ripe, in order to obtain to the liquor. The fur on the whole animal is long and full: the top of the head, ears, back, and sides, are ferruginous, and a small band of a similar colour commences beneath each ear, passing along the neck towards the sides. Part of the neck in front, the beginning of the body, and outsides of the shoulders and thighs, are black:

the tail is also black: the head, under part of the neck, insides of the limbs and belly, are yellowish ferruginous, somewhat paler on the breast: the iris of the eye is of a pale yellow: the fore-feet have four toes with crooked claws, and a very small thumb or fifth toe, with a small rounded nail: the hind-feet have five toes, with strong crooked claws on all: the tail is longer than the body, and appears equal to it in size when fully expanded. This animal, according to Sonnerat, is easily tamed, and is called about the coasts of Malabar of the name of the *Great Wood Rat.*

MADAGASCAR SQUIRREL.

Sciurus Madagascariensis. *S. niger, subtus, naso auriculisque albido-flavescentibus, cauda longissima angustata.*

Black Squirrel, with the nose, ears, and under parts, yellowish-white, and very long tapering tail.

L'Ecureuil de Madagascar. *Buff. Suppl. 7. p. 356. pl. 63.*

This which, from Mr. Cepede's description, given in the 7th supplemental volume of Buffon, should seem equal in size to the preceding, is said to measure seventeen inches to the tail, which is still longer, and of a dissimilar appearance to that of other squirrels; and rather resembling that of a cat, but feathering towards each side, and terminating in a very taper point. The whole upper parts and tail are of a deep black, and the nose, ears, and whole under parts, yellowish white:

the ears are plain or not tufted. It is a native of Madagascar.

LONG-TAILED SQUIRREL.

Sciurus Macrourus. *S. fuscus, subtus albido-flavescens, cauda corpore duplo longiore.*

Dark-brown Squirrel, yellowish white beneath, with the tail twice the length of the body.

Sciurus Macrourus. *S. cauda corpore duplo longiore grisea. Lin. Syst. Nat. Gmel. p.* 148.

Sciurus zeylonicus, &c. Rukkaia dictus. *Raj. Quadr. p.* 215.

Long-tailed Squirrel. *Penn. Ind. Zool. pl.* 1.

THIS was first described by Mr. Pennant in the Indian Zoology, and is said to be thrice the size of the common European Squirrel, with the crown of the head and the back black, and the cheeks, legs, and belly, of a dull yellow: between the ears is a yellow spot, and from each ear is a bifurcated black line pointing down the cheeks: the feet are black above, and red and naked beneath: the tail is near twice the length of the body, very full of hair, and of a light ash-colour: at the part next the body the hairs surround it, but on the remainder they flatten or spread on each side.

There is some reason for doubting whether this animal be really distinct from the preceding species. It is said to be found in Ceylon and Malabar. Mr. Pennant's description was made from the drawing engraved in the Indian Zoology, and upon the fidelity of the drawing must depend that of the description.

VAR.?

Abyssinian Squirrel. *Pennant Quadr. 2. p. 140.*
Sciurus Abessinicus. *Lin. Syst. Nat. Gmel. p. 149.*

An obscure animal, known only from the description of Thevenot, who says it is thrice the size of a common squirrel, and of a rusty black above, with the belly and fore-feet grey, and the tail a foot and a half long. Thevenot adds, that it was purchased at Moco of an Abyssinian.

JAVAN SQUIRREL.

Sciurus Bicolor. *S. supra niger, infra fulvus, auriculis acutis imberbibus, palmarum ungue pollicari magno rotundato. Lin. Syst. Nat. Gmel. p. 148.*
Blackish Squirrel, fulvous beneath, with pointed beardleſs ears, and large rounded thumb-claw.
Javan Squirrel. *Pennant Quadr. 2. p. 142.*

This also is a large species, measuring twelve inches to the tail, which is of the same length. The whole upper parts of the animal, with the outsides of the limbs, are of a dark or blackish brown, and the whole under parts, from the chin to the tail, of a bright fulvous or fox-colour: the tail is fox-coloured, with a cast of brown on its upper surface: the ears are short and hairy, but not furnished with long pencil-like hairs at the tips: the fore-feet are similar in structure to those of the Great Squirrel, first described, hav-

ing a very short thumb or interior toe, with a small rounded nail-shaped claw. It is said to be an inhabitant of Java, where it was observed by Mr. Sparrman.

GEORGIAN SQUIRREL.

Sciurus Anomalus. *S. supra flavus fusco mistus, subtus obscure fulvus, cauda concolore, auriculis imberbibus rotundatis. Lin. Syst. Nat. Gmel. p.* 148.

Dusky-ferruginous Squirrel, with tail and under parts fulvous, and rounded beardless ears.

Sciurus Anomalus. *Guldenstedt. Schreber. p.* 781. *t.* 115. C.

This species is said by its describer, Mr. Guldenstedt, to be a native of Georgia in Asia, and to be larger than a common squirrel. Its colour on the upper parts of the head, body, and limbs, is dusky ferruginous, and of the under parts and tail, bright ferruginous, the breast and belly being paler than the other parts; the ears are small and slightly sharpened at the tips*.

* In the figure published by Mr. Schreber in his History of Quadrupeds, and which, he tells us, was communicated by Dr. Pallas, the ears are represented rather sharp-pointed; yet in the specific character, given by Dr. Gmelin, they are said to be rounded.

RUDDY SQUIRREL.

Sciurus Erythræus. *S. supra ex flavo et fusco mistus, infra ex sanguineo-fulvus, auriculis ciliatis, cauda ex sanguineo fulva. Lin. Syst. Nat. Gmel. p.* 148. *Pall. Glir. p.* 377.

Yellowish-brown Squirrel, with the under-parts and tail red-ferruginous, and ciliated ears.

Ruddy Squirrel. *Pennant Quadr. 2. p.* 143.

The size of this species is said to be somewhat larger than that of a common squirrel. Its colour above is dusky ferruginous or yellowish brown, and beneath of the brightest deep ferruginous, or inclining to a sanguine red, and its tail is of the same colour, with a blackish stripe running down it: the fore-feet have four toes, with a rounded or wart-like protuberance in place of a thumb: the hind feet have five toes; the ears are slightly bearded. It is said to be a native of India. Upon the whole, I cannot but think that this animal is in reality no other than a variety of the *Javan Squirrel.* Yet Dr. Pallas, who mentions it in his *Glires,* seems to consider it as distinct.

BOMBAY SQUIRREL.

Sciurus Indicus. *S. cauda longitudine corporis apice aurantia. Lin. Syst. Nat. Gmel. p.* 149.

Purple-brown Squirrel, yellow beneath, with the tip of the tail orange-coloured.

Bombay Squirrel. *Pennant Quadr. 2. p.* 143.

THIS species appears to have been first described by Mr. Pennant, from a specimen preserved in the Museum of Dr. William Hunter. Its length is sixteen inches to the tail, which measures seventeen inches. The head, back, sides, upper parts of the legs and thighs, together with the tail, are of a dull purple; the lower part of the legs and thighs and the belly yellow; the end of the tail orange-coloured: the ears are tufted. It is a native of India, and is found about Bombay; but, according to Mr. Pennant, extends to Belisere, the opposite part of the peninsula of Hindostan. The species described and figured in the 7th supplemental volume of the Count de Buffon's Natural History, under the name of *Le Grand Ecureuil de la côte de Malabar*, is suspected by Mr. Pennant to be no other than a variety of the above. Should this be the case, it follows that the Bombay Squirrel is in reality the same with the *Great Squirrel* (Sciurus Maximus) first described.

COMMON SQUIRREL.

Sciurus Vulgaris. *S. auriculis apice barbatis, cauda dorso concolore. Lin. Syst. Nat. Gmel. p.* 145.
Reddish brown Squirrel, white beneath, with pencilled ears.
Sciurus vulgaris rufus, &c. *Briss. Quadr.* 150. *n.* 1.
Sciurus. *Gesn. Quadr.* 845. *Aldr. dig.* 396. *Jonst.* 163.
L'Ecureuil. *Buff.* 7. *p.* 253. *pl.* 32.
Common Squirrel. *Pennant Quadr.* 2. *p.* 139.

The general appearance and manners of this species are so well known that it might seem almost unnecessary to particularize them. It is a native of almost all parts of Europe as well as of the northern and temperate parts of Asia, but is observed to vary in the cast of its colours in different climates, and in the northern regions becomes grey in winter*: it also varies occasionally in size. The general measure of the European Squirrel seems to be about eight inches from nose to tail, and of the tail about seven. The colour is

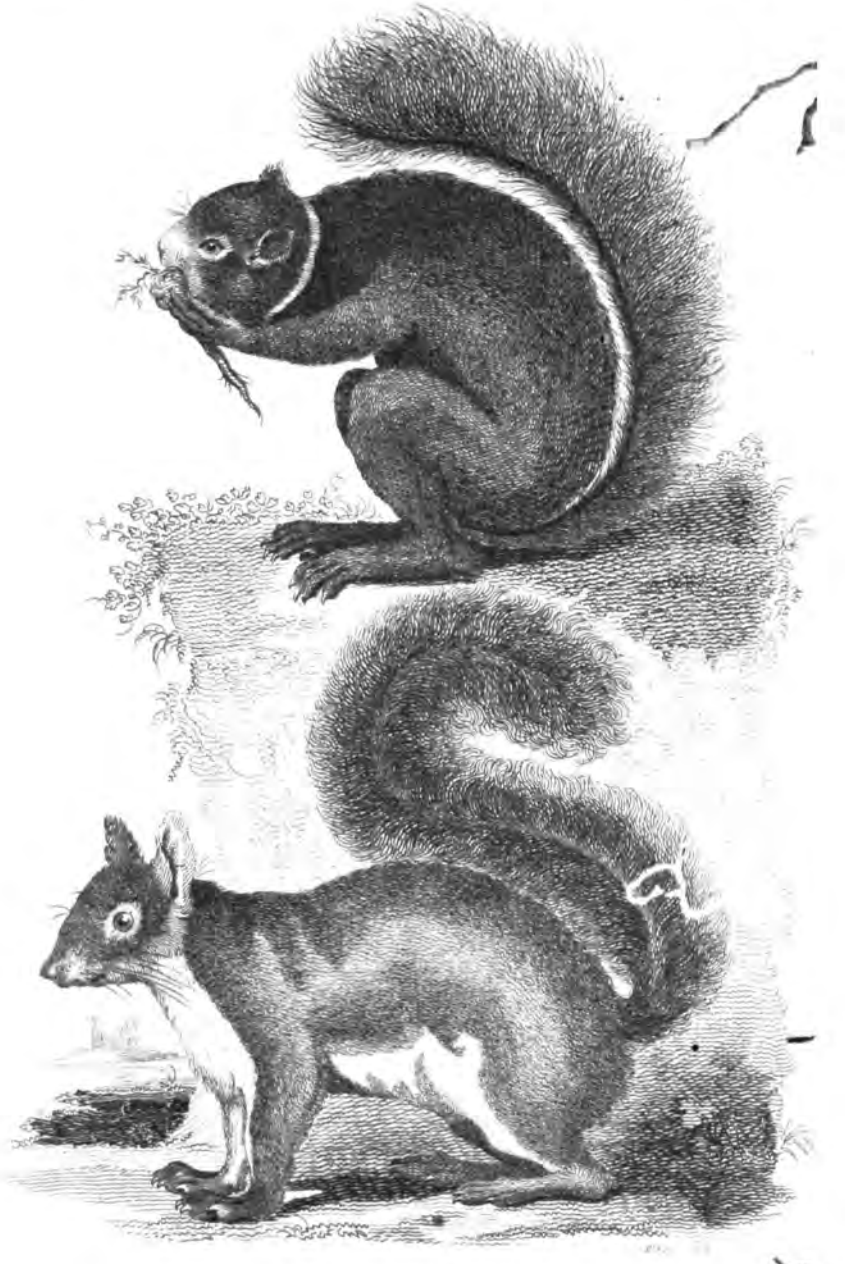
* This change of colour in the northern squirrels is not altogether owing to the severity of the cold, but takes place even in such as are kept in a warm room. Dr. Pallas had one brought to him on the 12th of September, which was then entirely red, or of the usual bright ferruginous colour; but, about the 4th of October, many parts of the body began to grow hoary; and at the time of its death, which happened on the 4th of November, the whole body had attained a grey colour, and the legs alone with a small part of the face, retained their original tinge. The furs of the northern squirrels, in their grey or winter state, are extremely fine and soft, and are known to the furriers by the name of *Petit-Gris*; by which title according to the Count de Buffon, those belonging to the Grey Squirrel of America, or following species, are also called.

a bright reddish brown, except on the breast and belly, which are nearly white: these colours are brightest in summer, and on the approach of winter change to a greyer or browner tinge: the eyes are large, black, and lively: the ears upright, and ornamented with long tufts or pencils of hair of a richer colour than that of the body: the legs are short and muscular; the toes strong and divided to their origin; the claws strong and sharp; so that the animal can readily climb the smoothest trees: on the fore-feet are only four toes, with a claw in the place of a thumb or inner toe: on the hind-feet are five toes: the tail is covered with very long hair, so disposed as to turn towards each side. In the spring these animals seem peculiarly active, pursuing each other among the trees, and exerting various efforts of agility. During the warm summer nights they may be also observed in a similar exercise. They seem, as Buffon observes, to dread the heat of the sun, for during the day they remain commonly in their nests, making their principal excursions by night. Their habitation is so contrived as to be perfectly clean, warm, and impenetrable by rain, and is composed of moss, dried leaves, &c. and situated between the fork of two branches: it has only a small aperture near the top, which is of a conical form, so as to throw off the rain. The young are generally three or four in number, and are produced about the middle of summer, or sometimes earlier.

The Squirrel feeds on the buds and young shoots of trees, and is said to be particularly fond of those of the fir and pine: it also collects great quantities of nuts, which it deposits in the hollows of trees for its winter food, together with beech-mast, acorns, &c. Dr. Pallas also assures us, that those of Siberia collect various kinds of fungi for this purpose. In a state of captivity, nuts form its principal food, but it will also eat a great variety of fruits and other vegetable substances, and is delighted with sugar and various sweets.

In some parts of Siberia the Squirrel is found entirely white, with red eyes. About lake Baikal it is often entirely black, or black with the belly white: and in some parts of Europe, and particularly in our own country, it is occasionally found with the tail milk-white, and all the other parts of the usual colour.

The Squirrel is an animal which in a state of nature can seldom have occasion to visit the water for the purpose of drinking, like other quadrupeds, and can obtain a sufficient supply of dew and rain from the leaves and the hollows of trees. It has even been supposed to have a dread of water; and it is affirmed by Gesner, from Olaus Magnus, and others, that when it wishes to pass a river or lake, in order to reach the trees that lie beyond, instead of swimming, it gets on a piece of bark, or other convenient substance, and elevating its tail to catch the wind, is thus transported to the opposite side. Some writers have affirmed that the



GREY SQUIRREL.

Lapland Squirrels sail over the lakes of that country in large parties, each mounted on his piece of bark, and fanning the air with his tail to promote the progress of his vessel. These tales, which do not appear very probable, must rest on the faith of their recorders.

GREY SQUIRREL.

Sciurus Cinereus. *S. cinereus, ventre albo, auriculis imberbibus. Lin. Syst. Nat. Gmel. p.* 147.
Ash-coloured Squirrel, white beneath, with beardless ears.
Sciurus Virginianus cinereus, &c. *Raj. Quadr.* 215.
Grey Squirrel. *Pennant Quadr.* 2. *p.* 144. *Catesb. Carol.* 2. *p.* 74. *pl.* 74.
Le Petit-Gris. *Buff.* 10. *p.* 116. *pl.* 25.

This species is confined to North America, in many parts of which it is extremely common, and in its general form, as well as in its way of life, resembles the European Squirrel. It is a large and elegant animal, being of the size of a half-grown rabbet, and measuring about twelve inches to the tail: different individuals, however, vary somewhat in point of size. The whole animal is of an elegant pale grey, with the insides of the limbs and the under parts of the body white: the ears and tail are sometimes tinged with black, and a yellowish cast prevails in some particular specimens. This animal is said to be found in Canada, Pensylvania, Virginia, and other American districts; though, according to Mr. Pennant, it scarce extends farther north than New England.

Mr. Pennant also allows that it is a native of South as well as North America. In the latter it is in some years so extremely numerous as to do incredible damage to plantations, especially those of maiz or Indian corn; for which reason it is one of the proscribed animals among the colonists. A reward of no less than three pence per head having been sometimes given for every one killed; and this, says Mr. Pennant, "proved such an encouragement, as to set all the idle people in the province in pursuit of them. Pensylvania alone paid, from January, 1749, to January, 1750, no less a sum than 8000l. of their currency; but, on complaint being made to the deputies, that their treasuries were exhausted by these rewards, they were reduced to one half." "How improved," adds Mr. Pennant, "must the state of the Americans be, in thirty-five years, to wage an expensive and successful war against its parent country, which before could not bear the charges of clearing the provinces from the ravages of these insignificant animals!" This species resides principally among trees, in the hollows of which it makes its nest, with straw, moss, &c. feeding on acorns, fir-cones, maiz, &c. as well as on fruits of various kinds. It is said to amass great quantities of provision for winter, which it deposits in holes which it prepares beneath the roots of trees, &c. It is a difficult animal to kill; changing its place on the trees with such expedition, as generally to elude the shot of the quickest marksman. It is said to be easily

tamed, and in that state will readily associate with other domestic animals.

BLACK SQUIRREL.

Sciurus Niger. *S. niger, auriculis imberbibus. Lin. Syst. Nat. Gmel. p.* 147.
Black Squirrel, with beardless ears.
Black Squirrel. *Catesb. Carol. 2. p.* 73. *pl.* 73. *Pennant Quadr. 2. p.* 145.

This is so much allied to the preceding, that it might be considered as a variety rather than a distinct species, were we not assured that it never associates with the grey squirrel; from which it also differs in having a somewhat shorter tail. It is entirely of a shining coal-black colour, except that the muzzle and the tip of the tail are sometimes white: specimens have also been seen with a white ring round the neck. In its manners it perfectly resembles the grey squirrel, inhabiting similar places, and committing equal depredations.

Var.?

CAT SQUIRREL.

This is said to be equal in size to the grey squirrel, but to have a coarse fur, mixed with dingy white and black; the throat, insides of the legs, and thighs, black; the tail much shorter

than in other squirrels, and of a dull yellow mixed with black. It is a native of Virginia, and was described by Mr. Pennant from a specimen in the collection of Mr. Knaphan. The figure given by Mr. Schreber, in his work on quadrupeds has every appearance of a mere variety of the grey squirrel; the tail being of similar length, and differing only in having a ferruginous cast. Perhaps the tail in the specimen described by Mr. Pennant might have been accidentally mutilated.

HUDSON'S BAY SQUIRREL.

Sciurus Hudsonius. *S. auriculis imberbibus, dorso glanco, ventre cinereo, cauda breviore ex rufescente glanca nigro marginata. Lin. Syst. Nat. Gmel. p.* 147.

Iron-grey Squirrel dashed with ferruginous, whitish beneath, with dusky side-stripe, and lanceolated tail edged with blackish.

Hudson's Bay Squirrel. *Pennant Quadr. 2. p.* 147.

The Hudson's Bay Squirrel is a native of the colder parts of North America, and more particularly of the region from whence it takes its name. It resides in the pine-forests of that country, and feeds chiefly on the cones. It is smaller than the common European squirrel, and the tail is neither so long in proportion, nor so full of hair. The colour of the upper parts is palish iron-grey, with a cast of ferruginous down the back, and of the under parts whitish or pale ash-

colour; the colours being pretty distinctly separated down the sides by a dusky line: the beginning of the tail is ferruginous, gradually sinking into iron-grey, and is of a narrow lanceolate form, with a sharp termination. This species is said not to alter its colour during the whole year. In winter it keeps in its nest, and makes its appearance on the return of the warm season.

Var.?

CAROLINA SQUIRREL.

THIS, though stationed as a distinct species by Mr. Schreber, is considered by Mr. Pennant as a variety only of the preceding. Its size is the same, but the disposition of the colours different: the head, back, and sides, being grey, white, and ferruginous, intermixed; the belly white, and the colour divided from that of the sides by a rust-coloured line: the lower part of the legs is red; the tail brown, mixed with black, and edged with white. It is found in Carolina.

PERSIAN SQUIRREL.

Sciurus Persicus. *S. obscurus, lateribus albis, subtus flavus, auriculis imberbibus, cauda ex atro cinerea annulo albo. Lin. Syst Nat. Gmel. p.* 148.

Dusky Squirrel, yellow beneath with white sides, beardless ears and blackish-grey tail with a white band.

In its general appearance and way of life this is said to resemble the common squirrel, but differs in colour, and in having plain or untufted ears: the upper parts are dusky, with the parts about the eyes black; the throat, breast, and belly, yellow, and the sides white: the tail blackish-grey, marked beneath, about the middle, with a white band; the feet reddish. It is an inhabitant of the mountainous parts of Persia.

FAIR SQUIRREL.

Sciurus Flavus. *S. auriculis subrotundis, pedibus pentadactylis, corpore luteo.*

Yellow Squirrel, with roundish ears and pentadactyle feet.

Fair Squirrel. *Pennant Quadr. 2. p.* 148.

This small species is said by Linnæus to be half the size of a common squirrel, and of a yellow colour, with the hairs tipped with white: the thumb of the fore-feet consists of little more than a very small claw. It is, according to Linnæus, an inhabitant of Carthagena in America, but it has likewise been supposed a native of India, and

is an animal not very distinctly known. Mr. Schreber seems to entertain some doubt whether it properly belongs to this genus.

BRASILIAN SQUIRREL.

Sciurus Æstuans. *S. griseus, subtus flavescens. Lin. Syst. Nat. Gmel. p.* 151.

Dusky Squirrel, yellow beneath, with longitudinal white stripe in the middle.

Brasilian Squirrel. *Pennant Quadr. 2. p.* 149.

THE first describer of this species was Mr. Pennant, who was presented with two specimens brought from South America. The head, body, and sides, are covered with soft dusky hairs tipped with yellow: the ears are plain, or without tufts; the tail rounded, and the hairs annulated, with black and yellow: the throat cinereous, the inside of the legs and the belly yellow, the latter divided down the middle by a white line, interrupted for a small space, and then continued to the [illegible]. The length of the animal is eight inches and a quarter to the tail, and the tail ten.

Varied or Striped Squirrels.

COQUALLIN.

Sciurus Variegatus. *S. corpore supra nigro albo fuscoque variegato. Lin. Syst. Nat. Gmel. p.* 151.

Subferruginous Squirrel, orange-tawny beneath, with the upper parts varied transversely with black brown and whitish undulations.

Le Coquallin. *Buff.* 13. *p.* 109. *pl.* 3.

Varied Squirrel. *Pennant Quadr.* 2. *p.* 147.

The title of Coquallin, applied to this animal, was instituted by the Count de Buffon, as an elegant abbreviation of the sesquipedalian name *Quauhtecollotlquapachtli*, by which it is said to have been called by the Mexicans. It is about twice the size of a common squirrel, and is transversely variegated on the upper part of the body with numerous undulations of black, white, and orange-brown, the under part being orange-tawny: the head, tail, and limbs, are dusky, and the ears and muzzle whitish. The manners of this species are somewhat different from those of the generality of Squirrels, since it does not reside on trees, but in holes under their roots, where it brings forth its young, and deposits a magazine of grain and fruits for winter use. It is a native of Mexico, and is said to vary in size, being sometimes scarce larger than a common squirrel. It also varies as to the distinctness or intensity both of the ground colour and variegations, and sometimes exhibits only an appearance of brown streaks on a ferruginous or reddish-

BARBARY SQUIRREL.

Sciurus Getulus. *S. fuscus, striis quatuor albidis longitudinalibus. Lin. Syst. Nat. Gmel. p.* 150.
Brown Squirrel, with four longitudinal white stripes.
Sciurus Getulus. *Aldr. dig.* 405. *Gesn. Quadr.* 112.
Le Barbaresque. *Buff.* 10. *p.* 126. *pl.* 27.
Barbarian Squirrel. *Edw. p.* 198.
White-striped Squirrel. *Pennant Quadr.* 2. *p.* 150.

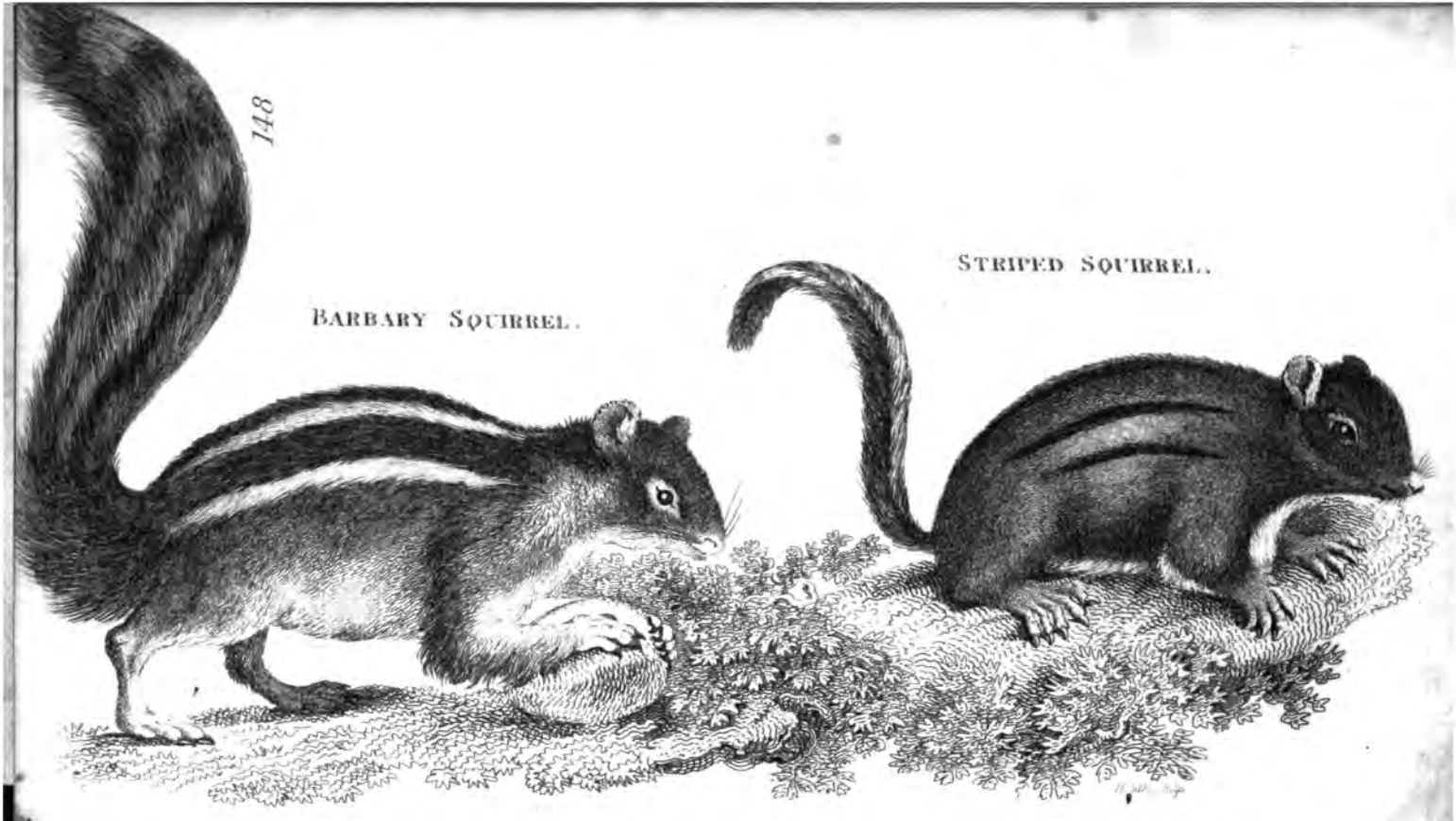
THIS species is of the size of a common squirrel, and of a reddish brown colour, with the legs somewhat paler, and the belly white: the body is marked on each side with longitudinal white stripes, and the tail is barred or shaded with alternate dark and light stripes: the ears are plain or without tufts, and are whitish, as are likewise the orbits of the eyes. It is a native of Barbary.

PALM SQUIRREL.

Sciurus Palmarum. *S. subgriseus, striis tribus flavicantibus, cauda albo nigroque lineata. Lin. Syst. Nat. Gmel. p.* 149.
Brown Squirrel, pale beneath, marked above with three longitudinal yellowish stripes, and the tail with blackish ones.
Mustela Africana. *Clus. exot. p.* 112.
Le Palmiste. *Buff.* 10. *p.* 126. *pl.* 26.
Palm Squirrel. *Pennant Quadr.* 2. *p.* 149.

The Palm Squirrel is somewhat larger than a common squirrel*, and is very nearly allied to

* The measures given by Daubenton of the specimen described by Buffon, were from the young animal, and consequently fall short of the proper size.



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the preceding species; but is of a deeper colour, and is marked by five stripes instead of four. The head and upper parts are of a very dark ferruginous brown, palest on the limbs; the throat, breast, and belly, are pale yellow; on the back is an obscure pale yellow stripe, and on each side the body are two of a similar colour, of which the lower are far less distinctly marked than the upper: the tail is of a dull or dingy yellow, barred or rather striped in a longitudinal direction with blackish bands. In some specimens the two lowest side-stripes are scarce distinctly perceptible; so that the species is more securely described in its specific character, by particularizing three stripes only. This animal is an inhabitant of the hotter parts of Asia and Africa, frequenting palm-trees, and in its liveliness and general habits much resembles the common European squirrel.

GINGI SQUIRREL.

Sciurus Ginginianus. *S. griseus, fascia utrinque longitudinali alba, cauda nigricante.*

Grey-brown Squirrel, with a longitudinal white stripe on each side, and blackish tail.

Sciurus Dschinschicus. *S. testaceus, fasciis lateralibus orbitisque albis, cauda nigra. Lin. Syst. Nat. Gmel. p. 151.*

This species is described by Sonnerat, who informs us that it is rather larger than the European squirrel, and of a brownish grey colour, lighter on the belly, legs, and feet: on each side

the belly is a white band, reaching from the shoulders to the thighs: the eyes are also encircled with white, and the tail is black, with whitish hairs intermixed. It is an inhabitant of Gingi in the East Indies.

VAR. ?

Plantane Squirrel. *Pennant Quadr.* 2. *p.* 151.

THIS, says Mr. Pennant, much resembles the common squirrel, but is lighter coloured, and has a yellow line extending along the sides from leg to leg. It is common in Java and Prince's Island, and is called by the Malayee, Ba-djing: it lives much on plantanes; is very shy; retreats at the sight of mankind, and clatters over the leaves of the plantanes with vast noise. It is also common on the tamarind trees.

CHILIAN SQUIRREL.

Sciurus Degus. *S. fusco-flavescens, linea humerali nigra. Lin. Syst. Nat. Gmel. p.* 152. *Molin. Chil. p.* 269.
Yellowish-brown Squirrel, with a black stripe on each shoulder.

THIS species is mentioned by Molina in his Natural History of Chili. It is somewhat larger than a black rat, and is of a yellowish brown colour, with a black stripe on each shoulder: the nose is sharp, the ears rounded, and the tail flocky towards the tip, and of the same colour with the body. It is a gregarious animal, and

inhabits holes in shrubby places, feeding on roots and fruits, of which it collects a magazine for food.

STRIPED SQUIRREL.

Sciurus Striatus. *S. fusco-flavescens, striis quinque longitudinalibus nigricantibus.*

Yellowish-brown Squirrel, with five longitudinal blackish stripes.

Sciurus flavus, striis quinque fuscis longitudinalibus. Lin. Syst. Nat. p. 87.

Ground Squirrel. *Catesb. Car.* 2. *pl.* 75. *Lews. Car. p.* 124. *Edw. pl.* 181.

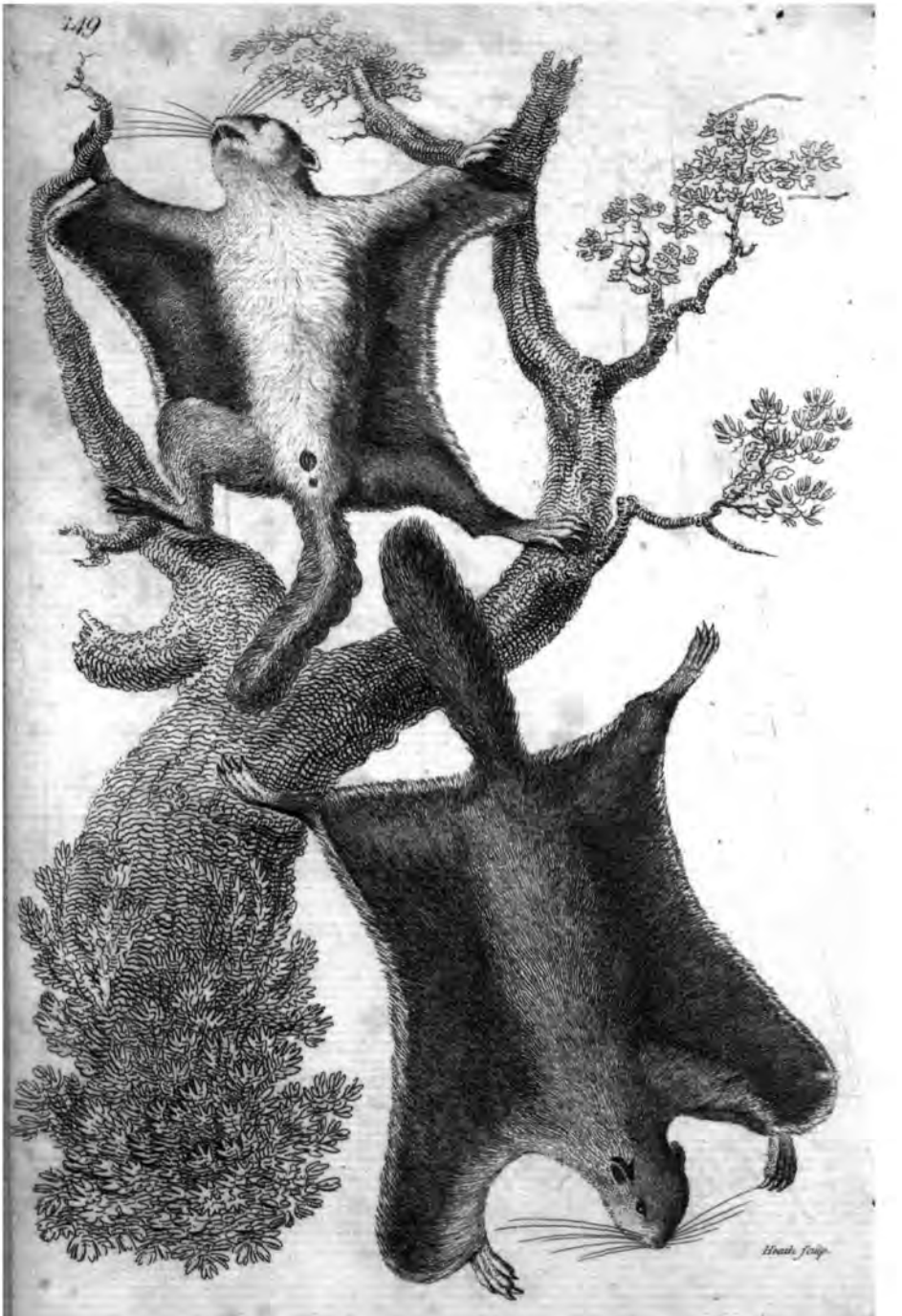
L'Ecureuil Suisse. *Buff.* 10. *p.* 126. *pl.* 28.

Striped Dormouse. *Pennant Quadr.* 2. *p.* 157.

THE Striped Squirrel is a native of the northern regions of Asia, and of several of the colder parts of North America: it has also been found, though very rarely, in some parts of Europe, and differs from the major part of the squirrel tribe in its manner of life, which rather resembles that of the dormouse, being chiefly passed in subterraneous retreats or burrows, the apartments of which are filled with various stores of acorns, nuts, grain, &c. collected for winter use. It also resembles some of the murine tribe, in being provided with cheek-pouches, for the temporary reception of food: a particularity not to be found in any other species of squirrel. Its general length is about five inches and a half, and of the tail rather more. Its colour on the upper parts is a reddish brown, and on the under white: down the ridge of the

back runs a black streak; and on each side the body are two others, the included space between each being of a pale yellow tinge: the tail is marked with annuli or circular spaces, like that of a mouse, but the fur spreads slightly on the sides, as in the rest of the squirrels, though in a much less conspicuous manner; and the tips of the hairs, being blackish, give the appearance, when the tail is spread, of three lines or streaks through its whole length.

These animals are, according to the observations of Dr. Pallas, extremely common in Siberia, inhabiting the maple and birch woods of that country, and generally forming their nests or burrows near the root of some tree: they are never known to ascend trees in the manner of other squirrels, unless suddenly surprised or pursued, when they climb with great expedition, and conceal themselves among the branches: they collect their stores during the autumnal season, and on the setting in of winter conceal themselves in their burrows, the entrances of which they stop; and pass the greatest part of the rigorous season in sleep, and in feeding on their collected stores; but if, by an unusual continuance of severe weather, their provisions happen to fail, they then sally out in quest of fresh supplies, and occasionally make their way into granaries, and even into houses. In the choice of their food they are remarkably nice, and have been observed, after filling their pouches with rye, to fling it out on meeting with wheat, and replace it with the su-



COMMON FLYING SQUIRREL.

perior grain. They are of a wild nature, and are by no means easily reconciled to a state of captivity; continuing timid, and shewing no symptoms of attachment to their owners. They are taken merely on account of their skins, which, though forming but a slight or ordinary fur, have a very pleasing appearance when properly disposed, and are said to be chiefly sold to the Chinese. It has been doubted whether those found in America be really of the same species with the European or Asiatic kind; but the differences are by no means such as to justify a specific distinction; consisting merely in a very trifling variation of size and colours.

Flying Squirrels.

COMMON FLYING SQUIRREL.

Sciurus Volans. *S. canus, subtus albus, hypochondriis dilatatis, cauda rotundata.*

Pale-grey Squirrel, white beneath, with the side-skin dilated into a flying membrane.

Sciurus hypochondriis prolixis volitans, cauda rotundata. Lin. Syst. Nat. Gmel. p. 154.

Sciurus volans. *Klein. act. angl.* 1733.

Mus Ponticus, &c. *Gesn. Quadr.* 743.

European Flying Squirrel. *Pennant Quadr. p.* 155.

THIS highly elegant animal is the only Flying Squirrel yet discovered in Europe, where it is extremely rare, being found chiefly in the most northern regions, as in Finland, Lapland, &c. It

also occurs in some districts of Poland. In many parts of Asia it is far more common, and abounds in the birch and pine woods of Siberia in particular. It appears to have been confounded by authors with the Virginian Flying Squirrel (S. Volucella), but is a totally distinct species. Its colour on the upper parts is an elegant pale or whitish grey, and on the under parts milk-white. Its general size is inferior to that of a common squirrel, measuring about six inches* and a quarter to the tail, which is shorter than the body, thickly furred, of a slightly flattened form, and rounded at the extremity. It is to Dr. Pallas that we owe the history of this animal's manners; little more being known to preceding naturalists than its general form and manner of flight, or rather springing, which is performed by means of an expansile furry membrane, reaching from the fore-feet to the hind. In order the better to manage this part, the thumb of the fore-feet is stretched out to a considerable length within the membrane, so as to appear in the skeleton like a long bony process on each of the fore-feet. The Flying Squirrel generally resides in the hollows of trees towards the upper part; preparing its nest of the finer mosses. It is a solitary animal, and is only seen in pairs during the breeding season. It rarely makes its

* The specimen in the Leverian Museum measures about seven inches to the tail, which is about four inches long. There appears to be some mistake in the measures given of this species in Mr. Pennant's History of Quadrupeds, where it is said to measure four inches and a quarter from nose to tail, and the tail five inches.

appearance by day, emerging only at the commencement of twilight, when it may be seen climbing about the trees, and darting with great velocity from one to the other. The colour of its upper part so much resembles that of the pale silvery bark of the birch-trees which it frequents, that it is by no means easy to distinguish it, while engaged in climbing about during its evening exercise. It feeds chiefly on the young shoots, buds, and catkins of the birch, as well as on those of the pine, &c. In winter it continues in its nest; coming out only in mild weather; but does not become torpid during that season.

This animal readily springs to the distance of twenty fathoms or more, and by this motion conveys itself from the top of one tree to the middle part of that to which it directs it flight, which is always slightly downwards. It very rarely descends to the surface, and, when taken, and placed on the ground, runs or springs somewhat awkwardly, with its tail elevated, and as soon as it gains a tree, instantly begins to climb it with great activity, sometimes elevating, and sometimes depressing its tail. If thrown from the top of a tree, it immediately spreads it membranes, and, balancing itself, endeavours to direct its motion by the assistance of the tail. The young are produced about the beginning or before the middle of May, and are two, three, and sometimes four, in number: they are at first blind, and nearly void of hair; and the parent fosters them by covering them with her flying-membrane;

leaving her nest only at the approach of evening, and carefully concealing the young with the moss of the nest. The young begin to acquire their fur at six days old; and at the same time the front teeth are visible: they continue blind, however, for the space of about thirteen days.

These animals are very difficultly supported in a state of confinement, and, from want of proper food, &c. are rarely preserved for any considerable length of time. In their manner of sitting and feeding, as well as in the action of washing their face with their paws, &c. they resemble the common squirrel. Their colour continues the same through the whole year. The tail, which in the full-grown animal is broad and very full of hair, is in the young of a round or cylindric form. Their voice resembles that of a mouse. The fur of this species, though soft and beautiful, is but little esteemed, on account of the slightness of the skin, and its want of durability.

VIRGINIAN FLYING SQUIRREL.

VIRGINIAN FLYING SQUIRREL.

Sciurus Volucella. *S. fuscus, subtus albido-flavescens, hypochondriis dilatatis, cauda lanceolata.*

Brown Squirrel, yellowish-white beneath, with the side-skin dilated with a flying membrane.

Sciurus hypochondriis extensis volitans, cauda elongata villosa. Lin. Syst. Nat. Gmel. p. 153.

Mus volans. *Lin. Syst. Nat. p. 75.*

Sciurus Americanus volans. *Raj. Quadr. 215.*

Le Polatouche. *Buff. 10. pl. 21.*

Flying Squirrel. *Catesb. Car. 2. pl. 76. Edw. pl. 191. Pennant Quadr. 2. p. 153.*

This species is much smaller than the preceding, from which it also differs in colour, being of an elegant brown or subferruginous mouse-colour above, and yellowish white beneath: the edges of the flying-membrane are of a darker or blacker tinge than the rest of the fur, contrasting with the white border of the under part: a few dusky undulations also take place about the back and shoulders: the tail is of a similar colour to the body, and of a flattened shape, or with the hair spreading towards each side, and the extremity somewhat sharpened: the eyes are large, and the ears rather short, almost naked, and slightly rounded. Its general length is five inches to the tail, which measures about four inches. It is a native of the temperate parts of North America, and has been found also in some of the southern parts of the American continent. It is an animal of great beauty, and is frequently kept

in a state of captivity, being readily tamed, feeding on various fruits, nuts, almonds, walnuts, &c. &c. and shewing a considerable degree of attachment to its possessor. Mr. Schreber assures us, that he saw one, which, on being held for some time in the hand of a stranger, would spring the length of a large room to the person to whom it had been most accustomed. It is naturally of a gregarious disposition, in which particular it differs widely from the preceding species, and may be seen, according to Mr. Catesby, flying, to the number of ten or twelve together, from tree to tree. Like the former species, it is chiefly a nocturnal animal, lying concealed during the day, and commencing its activity in the evening. It prepares its nest in the hollows of trees, with leaves, moss, &c. and it is said that several often inhabit the same nest, sometimes as many as twelve.

These animals reside constantly on the upper parts of trees, and never willingly quit them for the ground. They are said to be capable of swimming, in case of necessity; during which exercise they do not spread their membrane, but swim in the manner of other quadrupeds, and, after leaving the water, can exert their power of flight as readily as before. They are said to produce three or four young at a time.

SEVERN RIVER FLYING SQUIRREL.

Sciurus Sabrinus. *S. volitans, supra ex rubicundo fuscus, subtus ex flavescente albidus, cauda villosa planiuscula.*
Ferruginous-brown Flying Squirrel, yellowish white beneath, with slightly flattish villose tail.
Sciurus Hudsonius. *Lin. Syst. Nat. Gmel. p. 153.*
Greater Flying Squirrel. *Phil. Trans. vol. 62. p. 379.*
Severn River Squirrel. *Pennant Quadr. 2. p. 153.*

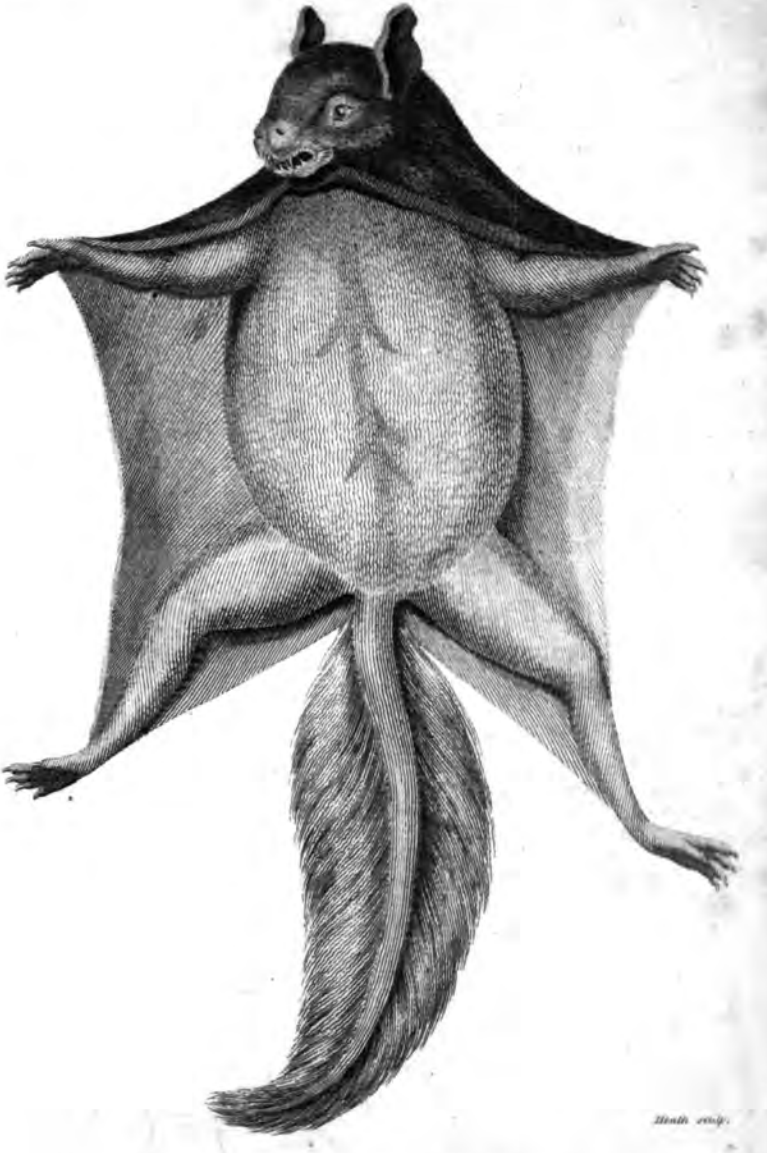
This is said to be at least equal in size to a common English squirrel, and is of a ferruginous ash-colour on the upper parts, and yellowish-white beneath: the flying-skin is disposed from leg to leg, as in the common flying squirrel, and the fur on the whole body is long and full: the tail also is well haired, but has less of the flat appearance than that of the European flying squirrel. It is found in the southern parts of *Hudson's Bay*, in the forests bordering on *Severn* river in *James's Bay*, and seems to have been first described by Dr. Forster in the Philosophical Transactions. I have given this species a new trivial, in order to avoid the repetition of the title *Hudsonius*, which takes place, through oversight, in the Gmelinian edition of the Systema Naturæ.

HOODED FLYING SQUIRREL.

Sciurus Sagitta? *S. hypochondriis prolixis volitans, cauda planopinnata lanceolata. Lin. Syst. Nat. p.* 88.
Ferruginous-brown Flying Squirrel, pale ferruginous beneath, with the flying-membrane commencing on each side the head.
Sciurus Virginianus volans. *Seb. mus.* 1. *p.* 72. *t.* 44. *f.* 3.
Sciurus cute a capite ad caudam relaxata volans. Lin. Syst. Nat. ed. 2. *p.* 46.
Hooded Squirrel. *Pennant Quadr.* 2. *p.* 155.
Das Kappen Eichhorn. *Schreb. p.* 822.

This, which appears to have been confounded by some authors with the *Taguan* or Great Flying Squirrel, is described by Linnæus, in the *Systema Naturæ*, where it is said to be of the size of a common squirrel, and of a dark ferruginous-brown above, and pale-ferruginous beneath: the tail is described as of the flatly-pinnated form, or with the hairs spreading towards each side, and the flying membrane is said to be extended from the head to the fore-feet, which is not the case in any species yet known, except in one described by Seba, and which has been named by Mr. Pennant the *Hooded Squirrel*. I am, therefore, strongly inclined to believe, that the animal described and figured by Seba is in reality the *Sciurus Sagitta* of Linnæus.

Seba describes the animal as rufous above and pale yellow-cinereous beneath, with feet resembling hands, and furnished with sharp crooked claws; the flying membrane commencing at the head, stretching along the neck, meeting under



Heath sculp.

HOODED FLYING SQUIRREL.

1801 Jan.y 1.st Publish'd by G. Kearsley Fleet Street London.

the throat, and thence extending to the fore and hind feet, and continued up the latter to the origin of the tail, which is rather long, and well covered with hair, so disposed as to spread on each side. He adds, that three specimens were in the cabinet of Mr. Vincent, one of which he was permitted to copy for his publication. His figure is about the size of a common squirrel, and is accurately represented, on a reduced scale, in the present work.

The only particular which appears to contradict the supposition above mentioned is the anomalous appearance of the teeth in the figure given by Seba, which do not resemble those of other squirrels, but rather those of the order *Feræ*. It is probable, however, since no mention is made of any such particular in the description, that this circumstance may have been merely owing to inattention on the part of the artist, and to that inaccuracy in minute particulars so common at the period of Seba's publication.

On the other hand, supposing the teeth to be accurately represented in Seba's figure, it is but just to allow that it may be really a distinct species, or may even form a separate genus, as distinct from that of *Sciurus* as the *Colugo* is from that of *Lemur*.

It is a native of Java, according to Linnæus, but Seba (perhaps erroneously) calls it a Virginian Squirrel.

TAGUAN.

Sciurus Petaurista. *S. hypochondriis prolixis volitans, supra saturatissime ex castaneo, subtus dilute ferrugineus, vel supra niger subtus canus, cauda corpore longiore, villosissima, terete nigricante, media ferruginea. Lin. Syst. Nat. Gmel. p.* 155. *Pall. Miscell. Zool. p.* 54. *t.* 6.

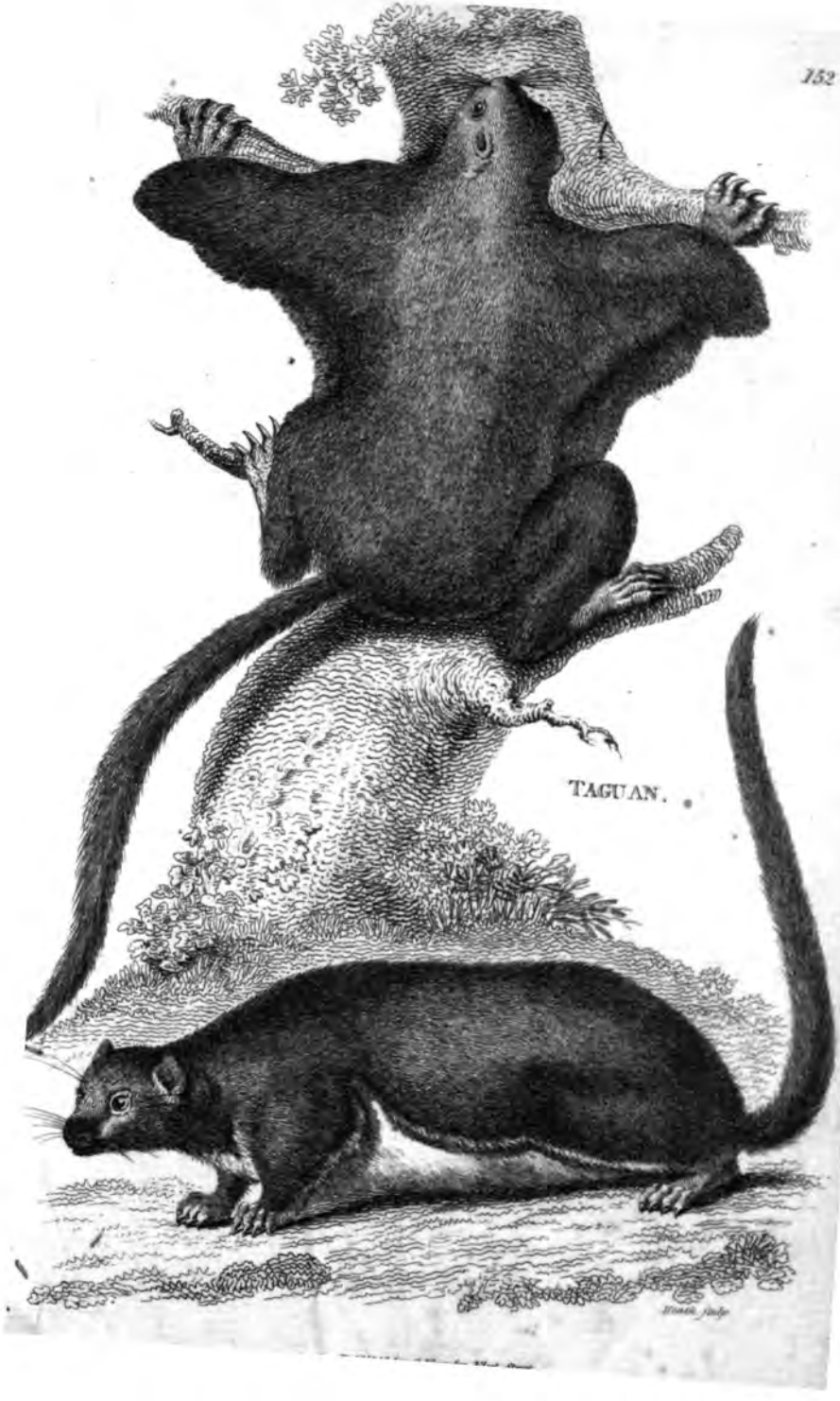
Chesnut-coloured Squirrel (sometimes blackish), pale ferruginous beneath (sometimes whitish), with very long, round, tapering, villose tail, and side-skin dilated into a flying membrane.

Taguan, ou Grand Ecureuil Volant. *Buff. Suppl.* 3. *p.* 150. *pl.* 21. *and* 7. *p.* 265. *pl.* 67.

Sailing Squirrel. *Pennant Quadr.* 2. *p.* 152.

The Taguan is by far the largest of all the flying squirrels, measuring eighteen * inches to the tail, which is nearly of similar length, and instead of the flattened or spreading appearance exhibited in most of the squirrels, is of a cylindric form, or like that of a cat: the head is rounded, rather small in proportion, and somewhat flattened on the top: the muzzle blunt, the ears very small and without tufts, the limbs stout, the fore-feet armed with four claws, and the hinder with five: the colour on all the upper parts is chesnut, brighter or darker in different individuals, and having commonly a hoary or greyish cast on the back and shoulders: the limbs and the sides of the flying-membrane are darker than the other parts,

* In the 3d supplemental volume of Buffon we have an account of a skin which measured twenty-three inches from nose to tail.



TAGUAN.

TAGUAN. *var.*

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and the tail is still deeper or more inclining to black: the breast and all the under parts are yellowish white, sometimes inclining to ferruginous. The disposition of the flying-membrane is similar to that of the common flying squirrel: it is extremely thin towards the middle, and gradually thickens as it approaches the limbs and border, where the dark colour of its upper part is contrasted with that of the white edge or verge.

The Taguan is a native of India and the Indian isles, residing in woods, and springing to a vast distance from tree to tree. It is said to be more frequent in Java than in other parts.

The difference of colour in different specimens, some being dusky above and whitish beneath, others ferruginous above and yellowish beneath, may be owing perhaps to the difference between the male and female.

It may be added, that a strong general similarity takes place between this animal and the Petaurine Opossum (Didelphis Petaurus), which, in all probability, is also a native of many of the Indian isles, as well as of New Holland, and may have been sometimes confounded by travellers with the Taguan.

MYOXUS. DORMOUSE.

Generic Character.

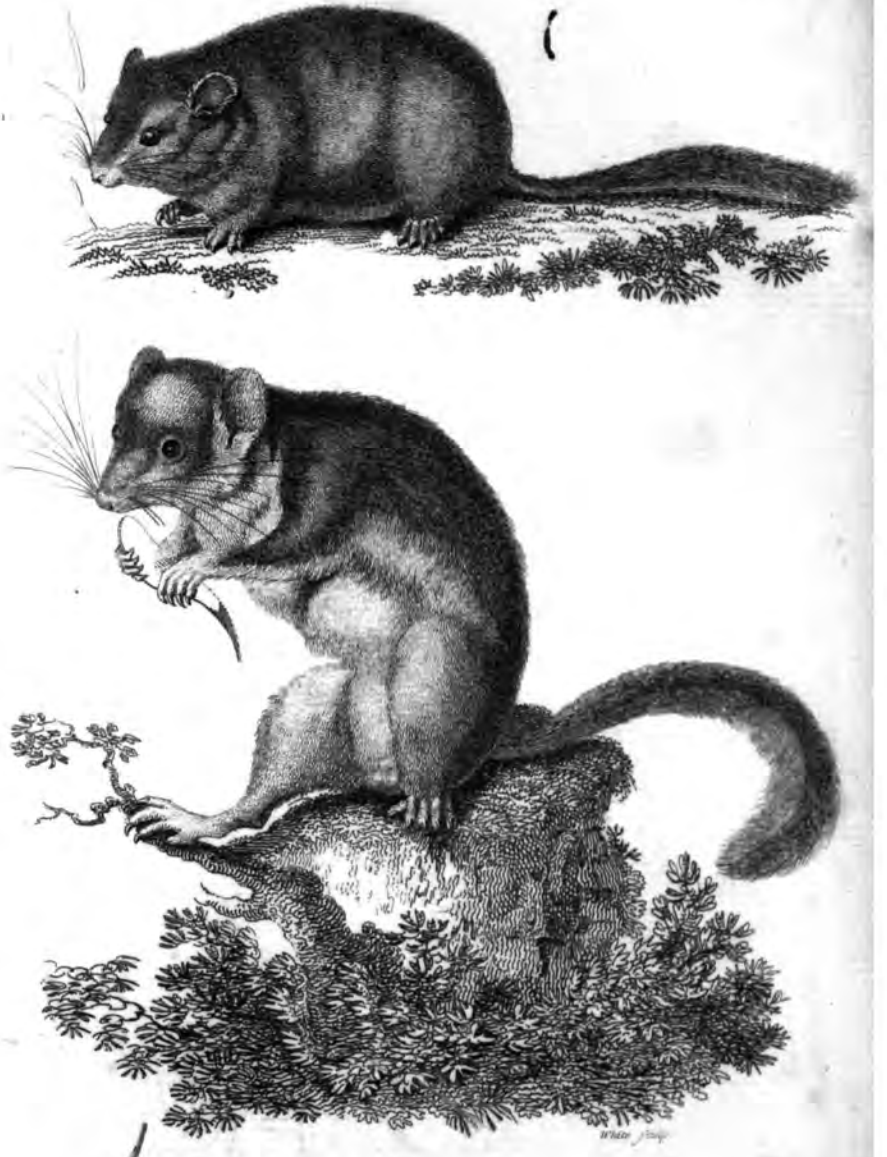
Dentes Primores duo: superiores cuneati: inferiores compressi.
Molares utrinque quatuor.
Mystaces longæ.
Cauda villosa, teres, versus apicem crassior.
Pedes æqualis longitudinis, anteriores tetradactyli.

Front-teeth two: the upper cuneated: the lower compressed.
Grinders four in each jaw.
Vibrissæ long.
Tail cylindric, villose, thicker towards the end.
Legs of equal length: forefeet tetradactylous.

FAT DORMOUSE.

Myoxus Glis. *M. canus, subtus albidus. Lin. Syst. Nat. p.* 155.
Grey Dormouse, whitish beneath.
Sciurus Glis. *Lin. Syst. Nat. p.* 87.
Mus Glis. *Pall. Glir. p.* 88.
Glis. *Plin. Hist. Nat. lib.* 8. *c.* 57. *Gesn. Quadr.* 619. *Aldr. dig.* 407.
Le Loir. *Buff.* 8. *p.* 158. *pl.* 24.
Fat Dormouse. *Pennant Quadr.* 2. *p.* 158.

THIS species, the *Glis* of Pliny and the old naturalists, is a native of France and the South of Europe. It also occurs in Russia, Austria, &c. residing on trees, and leaping from bough to bough in the manner of a squirrel, though with a



FAT DORMOUSE.

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less degree of agility. It feeds on nuts, acorns, fruit, &c. and during great part of the winter remains torpid in its nest, which is prepared in the hollows of trees, with dried leaves, moss, &c. During its state of torpidity it is said to grow very fat, contrary to the nature of most of the hybernating or sleeping animals; which are observed, on their first emerging from that state, to be far leaner than before its commencement. It is probable, however, that this animal awakes at intervals, and indulges in the use of its collected stores of provision; and the epigram of Martial must consequently be received with a proper degree of allowance for the popular belief of the ancients on the subject.

Tota mihi dormitur hiems; et pinguior illo
Tempore sum quo me nil nisi somnus alit.

Nurs'd by a long hibernal sleep,
I fatten by repose:
Nor food the nourishment can give
Which abstinence bestows.

It is but just to observe, that the Count de Buffon has very properly exposed the absurdity of the ancient notion; and has observed that the animal occasionally wakes, and makes use of its stock of provision. The truth is, that it is at all times fat, and appears as much so in spring as in autumn. By the ancient Romans it was numbered among the articles of luxury, and was fattened in proper receptacles, called *Gliraria*.

The size of this elegant species is not very far

short of that of a squirrel, measuring from nose to tail near six inches, and the tail four and a half. It is an animal of a much thicker form in proportion than a squirrel, and is of an elegant ash-colour, white on the under parts and insides of the limbs: the tail is very villose or furry, and of a slightly spreading form, like that of a squirrel: the eyes are large and black; the ears thin, rounded, and very slightly haired. Sometimes the upper parts of the body have a slight dusky and sometimes a ferruginous tinge. Its general manners resemble those of a squirrel; but it is not easily tamed. The young are produced about the middle of summer, and are four or five in number.

GARDEN DORMOUSE.

Myoxus Nitela. *M. rufus, subtus ex albo cinereus, macula nigra circa oculos et pone auriculas. Lin. Syst. Nat. Gmel. p.* 156. *Schreb. saeugth. p.* 833. *t.* 226.

Rufous Dormouse, greyish-white beneath, with a black mark about the eyes and behind the ears.

Mus quercinus. *M. cauda elongata pilosa, macula nigra sub oculis. Lin. Syst. Nat. p.* 156.

Mus Nitedula. *Pall. Glir. p.* 88.

Mus avellanarum. *Gesn. Quadr.* 833. *Aldr. dig.* 439.

Le Lerot. *Buff.* 8. *p.* 181. *pl.* 25.

Greater Dormouse, or Sleeper. *Ray Quadr.* 219.

Garden Dormouse. *Pennant Quadr.* 2. *p.* 159.

The Garden Dormouse is a native of the temperate and warmer regions of Europe and Asia,

GARDEN DORMOUSE.

WOOD DORMOUSE.

&c. Jun 1. London. Published by G. Kearsley Fleet Street.

and is commonly found in gardens, feeding on various kinds of fruit; particularly peaches and apricots. It makes its nest, like the rest of this genus, in the hollows of trees, and sometimes in those of walls, or even in the ground about the roots of trees, &c. collecting, for this purpose, dried leaves, grass, mosses, &c. In autumn it collects a quantity of nuts, mast, &c. and deposits it in its hole; and during the greatest part of the winter remains in a state of torpidity, awaking only at distant intervals. Its general length is about four inches and a half, and the tail rather less. It is of an elegant rufous or ferruginous colour above, and yellowish white beneath: the eyes are imbedded in a large black patch or spot, which extends to some distance beyond each ear: the tail is somewhat wider towards the end, and sharpens at the extremity, and is marked on that part by a longitudinal black stripe, having the edges white. These animals produce their young about the middle of summer, which are about five or six in number, and are said to be of very quick growth.

WOOD DORMOUSE.

Myoxus Dryas. *M. ex griseo rufus, subtus sordide albus, linea nigra recta utrinque per oculos ad auriculas ducta. Lin. Syst. Nat. Gmel. p. 156. Schreb. saeugth. p. 831. t. 225. B.*
Greyish-rufous Dormouse, whitish beneath, with a strait black stripe across the eyes to the ears.

This species is much allied to the preceding, but has a less sharpened visage, and a much shorter tail; and its general proportions bear a greater resemblance to those of the fat dormouse. Its length to the tail is about four inches, and the tail, about three inches. Its colour on the upper parts and tail is greyish ferruginous, and of the under parts yellowish white: the patch or black mark on each side the head is much narrower than in the preceding species, and extends only to the ears: the tail is very furry, the hair spreading as in that of a squirrel. It is said to be a native of Russia, Georgia, &c. inhabiting woods, &c.

COMMON DORMOUSE.

Myoxus Muscardinus. *M. rufus, gula albicante, plantarum pollicibus muticis.* *Lin. Syst. Nat. Gmel. p.* 156.
Rufous Dormouse, with whitish throat, and the thumbs of the hind-feet without claws.
Mus avellanarius. *Lin. Syst. Nat. p.* 83.
Mus avellanarum minor. *Aldr. dig.* 439. *Jonst. Quadr.* 168.
Dormouse or Sleeper. *Ray syn. Quadr.* 220.
Le Muscardin. *Buff.* 8. *p.* 193. *pl.* 26.
Dormouse. *Brit. Zool.* 1. *p.* 95. *Hist. Quadr.* 2. *p.* 161. *Edw. pl.* 266.

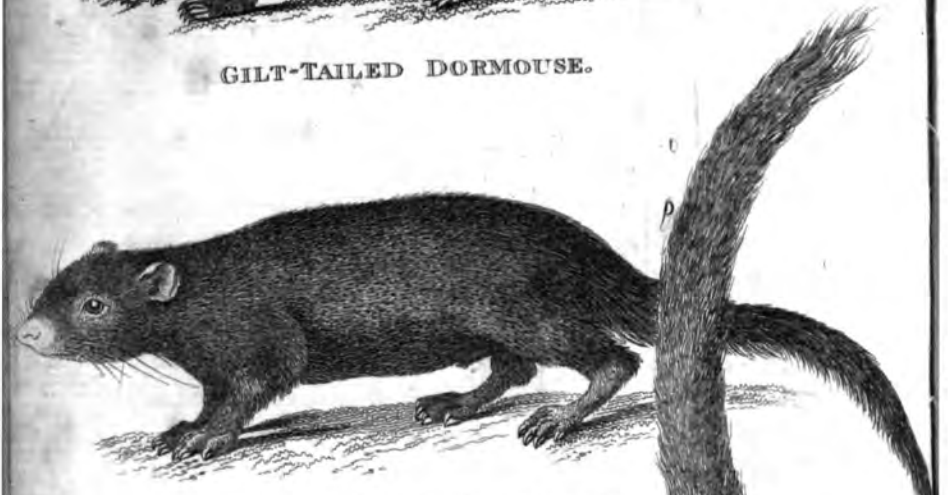
THE size of this animal is nearly equal to that of a mouse, but it is of a more plump or rounded form, and the nose is more obtuse in proportion: the eyes are large, black, and prominent; the ears broad, thin, and semi-transparent: the fore-feet have four toes, and the hind-feet five, but the interior of these latter are destitute of nails: the tail is about two inches and a half long, and closely covered on all sides with hair, which is rather longer towards the tip than on the other parts: the head, back, sides, belly, and tail, are of a tawny red colour; the throat white: the fur is remarkably soft, and the whole animal has a considerable degree of elegance in its appearance. It sometimes happens that the colour is rather brown than reddish.

Dormice, says Mr. Pennant, inhabit woods or very thick hedges; forming their nests in the hollows of some low tree, or near the bottom of a close shrub. As they want much of the spright-

liness of the squirrel, they never aspire to the tops of trees, or attempt to bound from spray to spray. Like the squirrel, they form little magazines of nuts, &c. for their winter provision, and take their food in the same upright posture. The consumption of their hoard during the rigour of winter is but small, for they sleep most part of the time, retiring into their holes on the approach of winter, and, rolling themselves up, lie torpid during the greatest part of the gloomy season. Sometimes they experience a short revival in a warm sunny day; when they take a little food, and then relapse into their former state.

These animals seldom appear far from their retreats, or in any exposed situations; for which reason they seem less common in this country than they really are. They make their nest of grass, moss, and dead leaves. According to the Count de Buffon it consists of interwoven herbs, and is six inches in diameter, open only above, and is situated between the branches of hazel and brushwood. The number of young is generally three or four.

GILT-TAILED DORMOUSE.



GUERLINGUET. *var.*

Heath. sculp.

GUERLINGUET.

Jan.ʳ 1 London. Published by G. Kearsley, Fleet Street.

GILT-TAILED DORMOUSE.

Myoxus Chrysurus. *M. purpureo-ferrugineus, stria capitis longitudinali caudæque medietate postica luteis.*
Purplish brown Dormouse, with the hind part of the tail and longitudinal stripe on the head gold-yellow.
Le Lerot à queue dorée. *Buff. Suppl. 7. p. 283. pl. 72.*
Hystrix chrysurus. *Schreb. saeugth. suppl.*
Gilt-tailed Dormouse. *Pennant Quadr. 2. p. 162.*

This singular species, though considered by its first describer, Mr. Allamand, as well as by Mr. Pennant in his History of Quadrupeds, as a species of Dormouse, is allied in perhaps an equal degree to the Porcupines, among which it is placed by Mr. Schreber. It is supposed to be a native of Surinam, and is remarkable for the beauty of its colours; being of a fine purplish brown above, rather paler beneath; the tail is brown at its base, black for half its length, and the remainder of a bright gold-yellow, and on the top of the head is a longitudinal stripe, of that colour. The head is large in proportion to the body; the eyes small; the ears moderately large, short, and rounded; the upper lip divided; the front teeth white and short; those of the lower jaw being the largest: on each side the nose are long vibrissæ or whiskers; the legs are short; the feet divided into four toes, with weak crooked claws; and in place of the thumb a small tubercle. On the hind part of the head, and along the back, are scattered several hairs much longer than the rest, and of a very different form and substance, being flat, stiff, and

rough to the touch: they seem to arise from small transparent sheaths, and their conformation is highly singular, each hair, or rather quill, being cylindric and very small near the body, growing flat towards the middle part, where it is half a line broad; and thence gradually diminishing to a very fine point: along the middle runs a channel or gutter, which if examined with a glass, appears yellow, while the sides, which are elevated, are of a brown colour, and thus a sort of double reflexion of light takes place, causing the purplish tinge above mentioned: these singular hairs or quills become gradually smaller as they approach the sides of the body, and quite disappear towards the abdomen. It seems to be an animal formed for climbing trees, and from the description given above it will appear that Mr. Schreber's opinion is just, and that it should in reality be considered, notwithstanding it diminutive size, as a species of Porcupine. Its length, from nose to tail, is five inches, and of the tail six inches and nine lines.

GUERLINGUET.

Myoxus Guerlingus. *M. ferrugineus subtus flavo-rufescens, cauda longa subdepressa attenuata.*

Ferruginous Dormouse, yellowish-rufous beneath, with long, subdepressed, tapering tail.

Le Grand Guerlinguet. *Buff. Suppl. 7. p. 261. pl. 65.*
Pennant Quadr. 2. p. 162.

This animal is described in the 7th supplemental volume of the Count de Buffon's Natural History, and is said to be of the size of a squirrel, but of a longer form, and of the colour mentioned in the specific character accompanying the present article. It is a native of Guiana, and resides on trees in the manner of a squirrel; feeding on fruits, &c. Its general residence is on palm trees. Its teeth resemble those of squirrels, and it has the same method of elevating its tail, which is longer than the body, and obscurely annulated with numerous alternate brown and yellowish bands, the tip itself being black. This animal measures between seven and eight inches to the tail, which is of equal length.

Var. ?

SMALL GUERLINGUET.

Le Petit Guerliguet. *Buff. suppl. 7. p. 263. pl. 66.*

This, which is supposed by the author to be a variety of the preceding, resembles it in almost every particular except size, measuring only four

inches and three lines from nose to tail, which is but three inches and three lines in length. The colour of this kind is also less brown than the former, and has a cast of cinereous olive-colour on the upper parts. It may be doubted whether it does not constitute a distinct species from the former; but the full history of these animals does not yet appear to be clearly understood. Mr. Pennant places them in the genus Dormouse; and at present we cannot do better than follow the example of that judicious author, who is emphatically termed by Dr. Pallas *Primus post immortalem Rajum Anglorum solidus Zoologus.* The Guerlinguets are said to be easily tamed, and to produce two young at a birth, which they bring forth in the hollows of trees.

AFRICAN DORMOUSE.

Myoxus Africanus. *M. griseus subtus albidus, linea superciliari & laterali albidis, cauda medio nigra, unguibus palmarum longissimis.*

Ferruginous-grey Dormouse, whitish beneath, with a white superciliary and lateral line, tail black in the middle, and claws on the fore-feet very long.

Earless Dormouse. *Pennant Quadr. 2. p. 161.*

THIS species was communicated to Mr. Pennant by Sir Joseph Banks, and is said to be found about the mountains of Sneeburgh, above 800 miles above the Cape of Good Hope. Its size is that of a squirrel, but its shape much broader and

flatter: its colour on the upper parts pale ferruginous; on the under whitish: above each eye is a white line, and on each side the body another: the head is flat; the nose obtuse; the eyes full and black; the whiskers long; the upper lip bifid; the auricles scarce apparent; the toes long and distinct; the knob on the fore-feet large, and the claws very long: the tail black in the middle, and hoary on each side. Whether it be really a species of Dormouse may perhaps be doubted.

DIPUS. JERBOA.

Generic Character.

Dentes Primores utrinque duo.	*Front-teeth* two above and below.
Pedes anteriores brevissimi; posteriores longissimi.	*Fore-legs* very short; *hind-legs* very long.
Clavículæ perfectæ.	*Clavicles* in the skeleton.

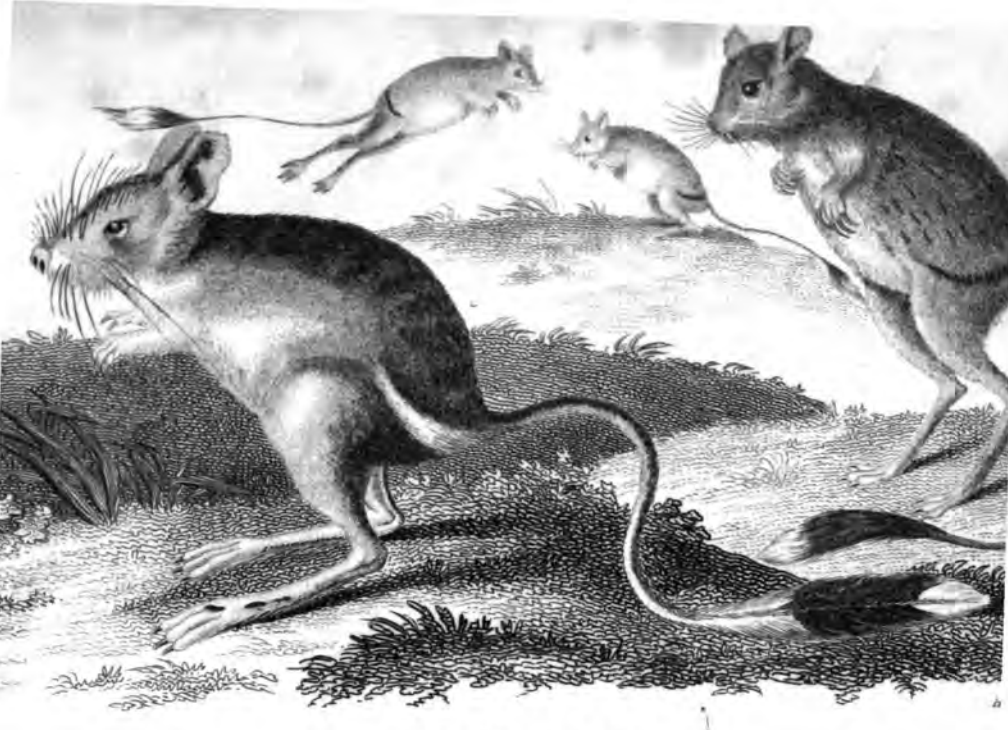
COMMON JERBOA.

Dipus Sagitta. *D. cauda longissima, apice subpennata nigro-alba, pedibus posticis longissimis tridactylis. Pall. Glir. p.* 87. *and p.* 306. *Mus.*

Pale-brown Jerboa, white beneath, with extremely long tridactyle hind feet, and very long tail with subpennated black-and-white tip.

Egyptian Jerboa. *Pennant Quadr.* 2. *p.* 164. *Edw. pl.* 219.

THIS is the species which seems to have been known to the ancients under the name of μυς διπους, or two-footed mouse, and which is represented, though with no great degree of exactness, on some coins of Cyrene, where it was anciently found in great abundance, and where it still continues. It is by some supposed to be the *Saphan* of the sacred writings. It is about the size of a rat, and is of a very pale tawny-brown above, and white beneath; and across the upper part



COMMON JERBOA.

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of the rump runs an obscure dusky band, which is probably not a permanent character, since it appears to be more or less distinct in different individuals. The head is short; the ears thin, broad, upright, and rounded: the eyes large, round, and dark coloured: the fore legs about an inch long, with five toes to each foot, the inner toe very small, but furnished with a sharp crooked claw, like the rest: the hind legs are extremely long, thin, sparingly covered with short hair, and very much resemble those of a bird: the hind feet have three toes each, the middle of which is somewhat longer than the rest, and all are furnished with sharp and strong claws: there is also a very small spur or back toe, with its corresponding claw; but this spur or back toe is so small, that it seems to have been generally overlooked by the describers of the animal; and it is highly remarkable, that neither Edwards nor Pennant, who both examined this species in a living state, nor even Dr. Pallas, whose accuracy in description is extreme, and who examined a great number of specimens, make the least mention of this part; nor does any vestige of it appear in the figure given by Dr. Pallas of the skeleton. We must, therefore, suppose either that the animal varies in this respect, or that it may perhaps constitute a sexual distinction, and may consequently be found only on some individuals. It may also occur in those which inhabit Barbary, Egypt, and Arabia; but not in those which are found in the sandy deserts between the Tanais

and the Volga, where Dr. Pallas examined his specimens; for this animal, like the Alagtaga or next described species, appears to inhabit very distant and dissimilar regions, occurring not only in many parts of Africa, but in the eastern parts of Siberia, &c. &c. It also appears from the observations of Dr. Pallas, that the two species, viz. the Common Jerboa and the Alagtaga, never inhabit the same spots, or intermix, but keep perfectly distinct or separate from each other.

The usual length of the common Jerboa, from nose to tail, is about seven inches and a quarter: the tail is about ten inches long, of a form rather inclining to square than cylindric, and of the same colour with the body, but terminated by an elegant, flattish, oval tuft of black hair, with a white tip. On each side the nose are situated several very long hairs or whiskers, as is usual in most animals of this tribe: the cutting-teeth are sharp and strong, and resemble those of a rat. In its attitudes and manner of progression this animal resembles a bird; generally standing, like the Kangaroo, on its hind feet, and leaping with much celerity, and to a great distance: but sometimes it sets its fore feet to the ground for a moment or two, and then recovers its former attitude. It principally uses the fore legs in feeding; pulling to its mouth the ears of corn, and various other vegetable substances on which it feeds. It inhabits subterraneous holes, which it either prepares itself, or finds ready excavated, in the dry, stony, and sandy deserts in which it resides.

During the day it commonly remains in its hole; coming out at night for food and exercise. On the approach of cold it is said to grow torpid for some time, reviving on the change of weather.

This animal has frequently been brought into Europe, and in a state of confinement has been known to burrow almost through a brick wall. It has been well figured by Edwards, who did not observe any appearance of a spur or back toe. It is possible, however, that from its minuteness it might have escaped his attention.

The measurements of this species are differently given by authors, and it appears clearly to vary somewhat in size in different countries; those of Siberia, described by Dr. Pallas, being smaller than those of Africa; and, after all, it is not impossible that they may in reality be distinct, though so nearly resembling each other as to make the distinction very difficult: in Dr. Pallas's specimens a white transverse band runs across the upper part of the thighs, whereas in that of Edwards a black or dusky band passes across the lower part of the back, without any appearance of the white one It is difficult to determine whether the kind described and figured by Mr. Bruce should be considered as a variety of the present species or of the Alagtaga; since it agrees with the Common Jerboa, in having the black dorsal band or crescent, while, on the contrary, in the number of its toes on the hind-feet it seems to differ from both; the author expressly declaring

that there are four toes forwards, exclusive of a very short one or spur behind.

Mons. Sonnini, in his Egyptian travels, assures us, that he never was able to find any difference either in the form or colour of the Egyptian Jerboa. Mons. Sonnini considers the Jerboa as constituting a link between quadrupeds and birds. In this idea he is by no means singular; the same sentiment naturally suggesting itself to the mind of every philosophical observer. Mons. Sonnini adds, that though the transition from quadrupeds to birds has not yet been investigated, we have nevertheless reason to consider the connexion as existing. We have the beginning of it in the Jerboa, and the last link of it in the Bat. We have every reason to believe, that the series of gradations will develope itself in proportion as good observers shall carry their researches into countries the natural history of which is still unexplored*.

M. Sonnini describes the Egyptian Jerboa as follows:

"Its size is nearly equal to that of a large rat: its head is broad, large in proportion to the body, the upper part flat, and of a light fawn-colour, striped with black: the upper jaw projects beyond the lower: they are both provided with two incisores; the upper ones broad, square, flat, and

* The Platypus or Duck-Bill, from New Holland, is a striking instance of the truth of this remark.

divided lengthwise by a groove in the middle; the lower ones longer, convex externally, pointed at their extremity, and bent inwards: the muzzle is short, wide, and obtuse; a number of stiff hairs grow out on each side, and form long whiskers: the nose is white, bare, and cartilaginous: the iris of its large and projecting eye is brown: the ears long, large, and covered with hair, so short that they appear naked except on very close inspection: externally they are white in the lower part, and grey upwards: the middle, as well as the sides of the head, is of a very light fawn-colour, mixed with grey and black: they entirely surround the meatus auditorius for about a third of their length, so that they exactly resemble the larger end of a cone: this conformation must encrease the animal's faculty of hearing, and is particularly well calculated to defend the inner part of the organ from the extraneous substances that might lodge there: the body is short; well provided with long, soft, silky hair: that which covers the back and sides is of an ash-colour throughout almost the whole of its length, and of a light fawn-colour where it approaches the points, which are black; but as the ash-coloured part is not visible, it may be said that the fur is fawn-coloured, with blackish zigzag stripes: these tints, which are somewhat dusky, form an agreeable contrast with the fine white of the belly: the fore-legs are so short that they scarcely extend beyond the hair: they are white, and have five toes; the inner one of which is short, rounded at

the end, and has no nail: the four other toes, the second outer one of which is the longest, are long, and armed with great hooked nails: the heel is very high, and the middle of the foot is naked and of a flesh-colour. These fore-feet are of no use to the animal in walking, but serve him only to lay hold of his food, and to carry it to his mouth, as also to dig his subterraneous abode. The hind legs are covered with long hair, fawn-coloured and white: its long feet are almost entirely bare, especially on the outside, which must necessarily be the case; since the animal, whether in motion or at rest, constantly leans on that part. These feet, so exceedingly long, have each three toes; the middle one something longer than the other two: they are all provided with nails, which are short, but broad and obtuse: they have also at the heel a kind of spur, or rather a very small rudiment of a fourth toe, which gives the Jerboa of Egypt some resemblance to the Alagtaga of Tartary described by Gmelin in the Petersburgh Transactions, and which part probably escaped Hasselquist, as well as many others. The toes and the heel are furnished below with long grey hairs tinged with yellow, except that at the origin of the toes, which is of a blackish cast: the nails, both of the fore and hind feet, are of a dirty white. According to Hasselquist the tail of the Jerboa is three times the length of the body; I never found it, however, much more than half that length: it scarcely exceeds the circumference of a goose-quill, but is of a quadrangular and not

a round shape: it is of a deeper grey above than below, and is furnished with short hair as far as the extremity, which ends in a tuft of long silky hair, half black and half grey."

The following is, according to Mons. Sonnini, the average size of the Egyptian Jerboa: it was taken from female specimens, because they happened first to be met with, but M. Sonnini assures us, that the difference of size between the sexes is but very slight.

"Length of the body, from the tip of the nose to the origin of the tail, five inches six lines.

"That of the head, measured in a strait line from the tip of the nose to the nape of the neck, one inch eight lines.

"Breadth of the muzzle at its extremity, four lines. That of the opening of the mouth, measured from one angle of the jaw to the other, three lines and a half. The upper jaw projects beyond the under three lines and a quarter.

"Length of the upper teeth, two lines: of the under, three.

"Distance between the nostrils, one line: between the tip of the nose and the anterior angle of the eye, ten lines. Between the posterior angle of the eye to the ear, two lines and a half. Between the two angles of the eye, five lines. Distance between the anterior angles of the eyes, measured in a strait line, one inch and half a line.

"Length of the ears, one inch and six lines: breadth of the ears at bottom, five lines. Distance between the ears, nine lines.

"Length of the tail, eight inches six lines: thickness of the tail, at its origin, two lines.

"Total length of the fore-legs, one inch seven lines: that of the great toe, one line and a half; of the second, including the nail, three lines.

"Total length of the hind-legs, six inches and two lines: that of the middle toe, including the nail, ten lines: that of the spur, one line."

"The females have eight nipples, the position of which is remarkable: they are situated more externally than in other quadrupeds: the first pair is beyond the bend of the shoulders; and the last is rather under the thigh than under the belly: the two other pairs, being on the same line, are consequently placed rather under the flanks than under the body.

"The Jerboa appears to be a prolific animal; for it is exceedingly numerous in Arabia, Nubia, Egypt, and Barbary. During my stay in, or rather during my excursions in Egypt, I opened several Jerboas. My principal aim was to ascertain that they had only one stomach, and consequently could not possess the power of ruminating. This was an answer to one of the questions that Michaelis, professor at Gottingen, had addressed to the travellers sent to the East by the king of Denmark, viz. *Whether the Jerboa was a ruminating animal?* A question arising from the same mistake which had occasioned the confounding the Jerboa with the *Daman Israel*, or *Saphan* of the Hebrews.

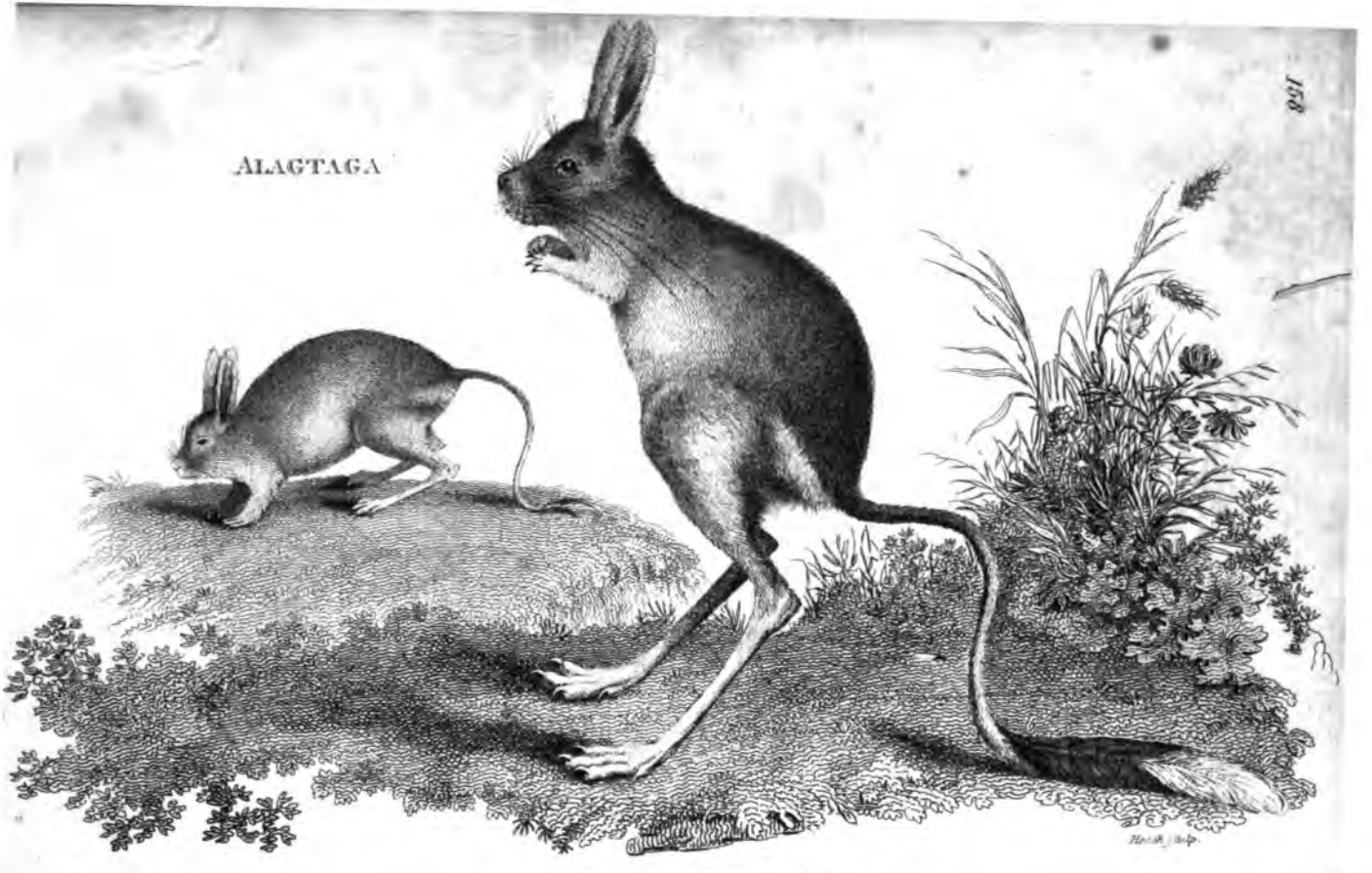
"The sand and ruins that surround modern

Alexandria are much frequented by the Jerboas. They live in society, and in burrows, which they dig with their teeth and nails. I have even been told, that they sometimes make their way through the soft stone which is under the stratum of sand. Though not absolutely wild, they are very shy, and upon the least noise, or the sight of any object, retire precipitately to their holes. They can only be killed by surprise. The Arabs contrive to take them alive, by stopping up all the avenues to their burrows except one, by which they force them to come out. I never ate any: their flesh indeed is said to be not very palatable, though it is not despised by the Egyptians. Their skin, covered with soft and shining hair, is used as a common fur.

"In Egypt I kept six of these animals for some time in a large iron cage: the very first night they entirely gnawed through the upright and cross pieces of wood, and I was obliged to have the inside of the cage lined with tin. They ate rice, walnuts, and all kinds of fruit. They delighted in being in the sun; and when taken into the shade, huddled together, and seemed to suffer from the privation of heat. It has been said that the Jerboas sleep by day, and never in the night; but, for my part, I observed quite the contrary. In a state of liberty they are found round their subterraneous habitations in open day, and those which I kept were never more lively nor awake than in the heat of the sun. Although they have a great deal of agility in their motions, they

seem to be of a mild and tranquil disposition. Mine suffered themselves to be touched without difficulty; and there was neither noise nor quarrel among them, even when taking their food. At the same time they testified neither joy, fear, nor gratitude: their gentleness was neither amiable nor interesting: it appeared to be the effect of cold and complete indifference, bordering on stupidity. Three of these animals died successively, before my departure from Alexandria. I lost two others during a somewhat stormy passage to the isle of Rhodes, when the last, owing to the negligence of the person to whose care it was committed, got out of its cage and disappeared. I had a strict search made for it, when the vessel was unloaded, but without effect: it had, no doubt, been killed by the cats."

Mons. Sonnini seems inclined to think that the Alagtaga or Tartarian Jerboa described by Gmelin in the Petersburgh Transactions, is no other than the Egyptian Jerboa, notwithstanding its different residence.



Hooth sculp.

Jun.r 1. London Publish'd by G. Kearsley. Fleet Street.

ALAGTAGA.

Dipus Jaculus. *D. cauda longissima apice pennata nigro-alba, pedibus posticis maximis pentadactylis. Pall. Glir. p.* 87. *and* 275. *Mus.*

Pale-brown Jerboa, white beneath, with extremely long pentadactyle hind-feet, and very long tail with subpennated black-and-white tip.

Siberian Jerboa. *Pennant Quadr. 2. p.* 166.

Alagtag'. *Buff.* 13. *p.* 141. *Schreb. saeugth. p.* 842.

In its general appearance this species perfectly resembles the common or Egyptian Jerboa, but is considerably larger, though there appear to be permanent varieties or races which are, on the contrary, much smaller than the common species. It is principally distinguished by the remarkable character of the hind feet, each of which has a pair of very conspicuous spurs or additional toes, situated at some distance above the front toes, and furnished with sharp claws.

In the Leverian Museum is a very fine specimen of this animal, which has been figured in Mr. Pennant's History of Quadrupeds. The colour of the Siberian Jerboa or Alagtaga is nearly the same as that of the Egyptian; but there is no appearance of the dusky band across the lower part of the back, or any transverse undulations; the whole upper parts being of a pale yellowish fawn-colour, and the under parts white. Its length is about eight inches, and the tail ten. It is found, according to Dr. Pallas, from the Caspian sea to the river Irtish, but is no where very

frequent. It inhabits dry, sandy, and gravelly soils.

Of this species there are two supposed varieties, agreeing in form with the above mentioned, but differing in size, and in some degree in colour; but the differences are not such as to justify our considering them as specifically distinct. The first of these varieties is the *Middle Siberian Jerboa*, which is of the size of a rat, and has the thighs crossed by a white line; and a whitish zone or circle surrounds the nose. It is found in the eastern deserts of Siberia and Tartary, beyond the lake Baikal. It also occurs in Barbary and Syria, and extends, according to Dr. Pallas, even as far as India. The other variety is called by Mr. Pennant the *Pygmy Siberian Jerboa*. It agrees in form with the other, but has no white circle round the nose, and has a smaller tuft to the tail, the end of which is just tipped with white. In size it is far inferior to the *middle* variety. It is said to inhabit the same places with the large or first described kind. All these agree in their manners, burrowing in hard, clayey ground, not only in high and dry spots, but even in low and salt places; digging their holes with great celerity with their fore feet and teeth; thus forming oblique and winding burrows, of some yards in length, and ending in a large hole or receptacle by way of nest, in which are deposited the herbs, &c. on which they feed. They are said to wander about chiefly by night. They sleep rolled up, with the head between the thighs:

they are extremely nimble, and on the approach of danger spring forward so swiftly, that a man well mounted can scarcely overtake them. They are said to be particularly fond of the roots of tulips, and some other bulbous-rooted plants. They are supposed to sleep during the winter in the manner of Dormice.

The large, or middle variety of this species appears to be figured by Aldrovandus, under the title of *Cuniculus Indicus Utias dictus.*

It is possible that Mr. Bruce's description may refer to the same animal, since he expressly affirms, that the hind feet have four toes besides a spur. His figure, however, does not represent this particular distinctly, and is besides marked across the lower part of the back by the dusky band or crescent, which generally appears on the Common Jerboa.

Mr. Bruce tells us, that there is little variety in the animal, either in size or colour; but that towards Aleppo they have broader noses than the African ones; that their bodies are thicker, and their colour lighter.

"The Arabs of the kingdom of Tripoli (says Mr. Bruce) make very good diversion with the Jerboa, in training their greyhounds, which they employ to hunt the Gazel or Antelope, after instructing him to turn himself by hunting this animal. The Prince of Tunis, son of Sidi Younis, and grandson of Ali Bey, who had been strangled by the Algerines when that capital was taken, being then an exile at Algiers, made me a present

of a small greyhound, which often gave us excellent sport. It may perhaps be imagined that a chace between these two creatures could not be long: yet I have often seen, in a large inclosure, or court-yard, the greyhound employ a quarter of an hour before he could master his nimble adversary: the small size of the creature assisted him much; and had not the greyhound been a practised one, and made use of his feet as well as his teeth, he might have killed two Antelopes in the time he could have killed one Jerboa."

I must not omit to add, that Mr. Bruce cannot allow the Jerboa to be the *Saphan* of the sacred writings.

CAPE JERBOA.

Dipus Cafer. *D. spadiceus, subtus subcinereus, palmis pentadactylis, plantis tetradactylis, cauda villosissima apice nigra.*
Ferruginous Jerboa, pale ash-coloured beneath, with pentadactyle fore-feet, tetradactyle hind-feet, and very villose tail tipped with black.
Jerboa Capensis. *Mill. cim. phys. p.* 62. *t.* 31.
Grand Gerbo. *Buff. Suppl.* 6. *p.* 260. *pl.* 42.
Cape Jerboa. *Pennant Quadr.* 2. *p.* 170.

This is by far the largest of all the Jerboas, and is a native of the mountainous country to the north of the Cape of Good Hope. Its length from nose to tail is one foot two inches; of the tail near fifteen inches. The head is broad; the muzzle somewhat sharp; and the upper jaw longer

CAPE JERBOA.

Sen. Jan'y. Publish'd by G. Kearsley. Fleet Street.

than the lower. The general colour of the animal is a pale ferruginous above, and pale ash-colour beneath. The nose is black and bare to some little distance up the front: the ears large: the whiskers long and black: the tail is of the same colour with the body for about half its length; the remainder blackish, and extremely villous or full of hair. It is an animal of great strength and activity, and will spring to the distance of twenty or thirty feet at once. When eating, it sits upright in the manner of a squirrel. It burrows in the ground, like the smaller kind of Jerboas, with great ease and expedition; having very strong and long claws, five in number, on the fore feet: those on the hind feet are rather short, and are four in number.

This animal is among the late accessions to Natural History. It seems to have been first figured in the miscellaneous plates of Mr. Millar. A figure also occurs in the sixth supplemental volume of the Count de Buffon's History of Quadrupeds. It is called by the Dutch colonists, at the Cape, by the name of *Springen Haas or Jumping Hare.*

TORRID JERBOA.

Dipus Meridianus. *D. palmis subtetradactylis, plantis pentadactylis, cauda concolore. Lin. Syst. Nat. Gmel. p.* 159.

Yellowish-brown Jerboa, white beneath, with subtetradactyle fore-feet, pentadactyle hind-feet, and tapering tail of the same colour with the body.

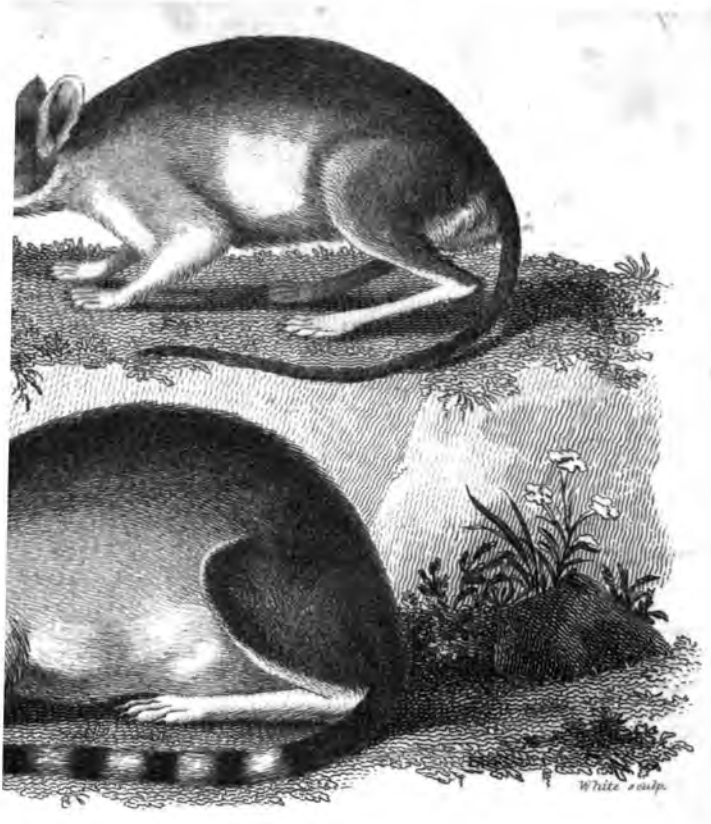
Mus longipes. *Lin. Syst. Nat. p.* 84. *Pall. Glir. p.* 88.

Torrid Jerboa. *Pennant Quadr.* 2. *p.* 171.

THIS species, according to Dr. Pallas, was first figured by Seba, whose specimen appears to have been not fully grown. Specimens were brought to Dr. Pallas in the year 1770, which were taken on the borders of the sandy desert of *Naryn*, in 46½ north latitude. The burrows or passages which they had formed in the dry soil, had a triple entrance, and were about an ell deep in the ground. The size of this species is between that of a rat and a field-mouse; and notwithstanding the great length of the hind legs, it does not leap, like the rest of the Jerboas, but runs in the manner of the rat tribe; and it seems to be on this account that Mr. Pennant has ranked it under his division of Jerboid Rats, rather than among the true Jerboas. The length from nose to tail is rather more than four inches; and of the tail rather more than three: the nose is blunt; the mouth placed far beneath; the upper lip bifid; the ears large and rounded; the fore legs short, with four toes, and a tubercle in place of a thumb: the hind legs long and naked: the toes long and slender; the exterior one shorter than

TORRID JERBOA.

TAMARISK JERBOA.



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the rest. The colour of the animal is brown above, and white beneath; the colours separated along the sides by a yellowish line.

TAMARISK JERBOA.

Dipus Tamaricinus. *D. palmis subtetradactylis, plantis pentadactylis, cauda obsolete annulata. Lin. Syst. Nat. Gmel. p.* 159.

Yellowish-brown Jerboa, white beneath, with subtetradactyle fore-feet, pentadactyle hind feet, and tapering tail obscurely annulated with brown.

Mus tamaricinus. *Pall. Glir. p.* 88. *t.* 19.

Tamarisk Rat. *Pennant Quadr.* 2. *p.* 175.

This species, which was first discovered by Dr. Pallas, is about the size of the brown rat. It is an inhabitant of the most southern parts of the Caspian deserts, and probably of the warmer parts of Asia. It delights in low grounds and salt marshes, and burrows under the roots of the tamarisk-bushes. Each burrow has two entrances, and is very deep. The animal comes out by night to feed, and makes its principal repast on succulent maritime plants, as the Salsola, &c. which in the salt deserts it inhabits are very plentiful. The head of this species is oblong; the whiskers large; the nose blunt; and the nostrils covered by a flap: the eyes large; the ears large, oval, and naked: the space round the nose and eyes, and beyond the ears, white: the sides of the head and neck cinereous: the back and sides yellowish grey: the tips of the hairs brown: the

breast and belly white: the tail ash-coloured, and annulated more than half way from the base with rings of brown: the hind legs are long in proportion to the fore legs; and the feet are longitudinally black beneath: on the fore feet is a warty tubercle in place of the thumb. The length from nose to tail is about six inches; the tail not quite so long.

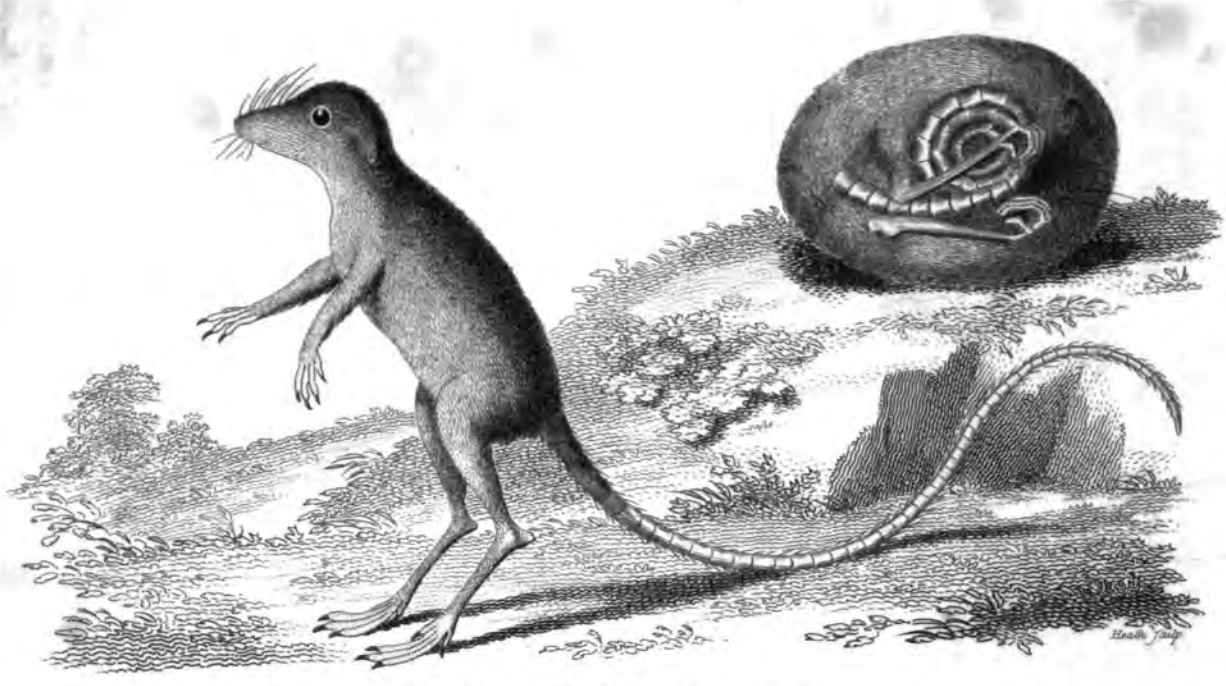
CANADIAN JERBOA.

Dipus Canadensis. *D. fusco-flavescens, subtus albidus, palmis tetradactylis, plantis pentadactylis, cauda longa submuda murina.*
Yellowish-brown Jerboa, whitish beneath, with the fore-feet tetradactylous, the hind-feet pentadactylous; the tail long and mouse-like.
Dipus palmis tetradactylis, plantis pentadactylis, cauda annulata undique setosa.
Jumping Mouſe of Canada. *Lin. Trans.* 4. *p.* 157. *pl.* 8.
Canada Rat. *Pennant Quadr.* 2. *p.* 172.

This minute species, which is figured on the annexed plate in its natural size, and represented both in its active and torpid state, is a native of Canada, and appears to have been first discovered by General Davies, who had an opportunity of examining it during his residence at Quebec, and who has described it in the fourth volume of the Transactions of the Linnæan Society.

The description is as follows:

"As I conceive there are very few persons, however conversant with natural history, who may have seen or known that there was an ani-



CANADIAN JERBOA, *nat size.*

1801 Jan.ʳʸ 1ˢᵗ London Published by G. Kearsley Fleet Street.

mal existing, in the coldest parts of Canada, of the same genus with the Jerboa, hitherto confined to the warmer climates of Africa, I take the liberty of laying before this society the following observations, accompanied by a drawing of an animal of that kind, procured by myself, in the neighbourhood of Quebec, during my last residence in that country. The specimens from which I made the drawing are now in my collection. With respect to the food, or mode of feeding, of this animal, I have it not in my power to speak with any degree of certainty, as I could by no means procure any kind of sustenance that I could induce it to eat; therefore, when caught, it only lived a day and a half. The first I was so fortunate to catch was taken in a large field near the falls of Montmorenci, and by its having strayed too far from the skirts of the wood allowed myself, assisted by three other gentlemen, to surround it, and after an hour's hard chace, to get it unhurt, though not before it was thoroughly fatigued, which might in a great measure accelerate its death. During the time the animal remained in its usual vigour, its agility was incredible for so small a creature. It always took progressive leaps of from three to four, and sometimes of five yards, although seldom above twelve or fourteen inches from the surface of the grass; but I have frequently observed others in shrubby places, and in the woods, among plants, where they chiefly reside, leap considerably higher. When found in such places it is impossible to take them,

from their wonderful agility, and their evading all pursuit by bounding into the thickest part of the cover they can find. With respect to the figure given of it in its dormant state, I have to observe, that the specimen was found by some workmen, in digging the foundation for a summer-house in a gentleman's garden, about two miles from Quebec, in the latter end of May, 1787. It was discovered enclosed in a ball of clay, about the size of a cricket-ball, nearly an inch in thickness, perfectly smooth within, and about 20 inches under ground. The man who first discovered it, not knowing what it was, struck the ball with his spade, by which means it was broken to pieces, or the ball would have been presented to me. The drawing will perfectly shew how the animal is laid during its dormant state. How long it had been under ground, it is impossible to say; but as I never could observe these animals in any parts of the country after the beginning of September, I conceive they lay themselves up some time in that month, or beginning of October, when the frost becomes sharp; nor did I ever see them again before the last week in May, or beginning of June. From their being enveloped in balls of clay, without any appearance of food, I conceive they sleep during the winter, and remain for that term without sustenance. As soon as I conveyed this specimen to my house, I deposited it, as it was, in a small chip box, in some cotton, waiting with great anxiety for its waking; but that not taking

place at the season they generally appear, I kept it until I found it begin to smell: I then stuffed it, and preserved it in its torpid position. I am led to believe its not recovering from that state, arose from the heat of my room during the time it was in the box, a fire having been constantly burning in the stove, and which in all probability was too great for its respiration."

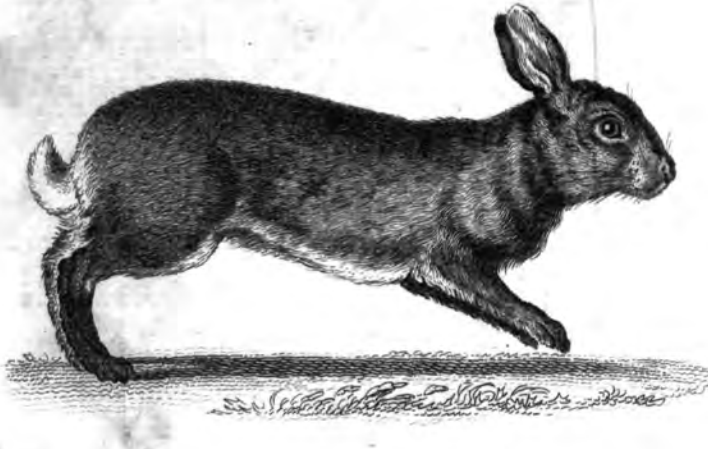
This animal, in the last edition of Mr. Pennant's History of Quadrupeds, is referred to the genus *Mus*, and is described under the name of the *Canada Rat*.

LEPUS. HARE.

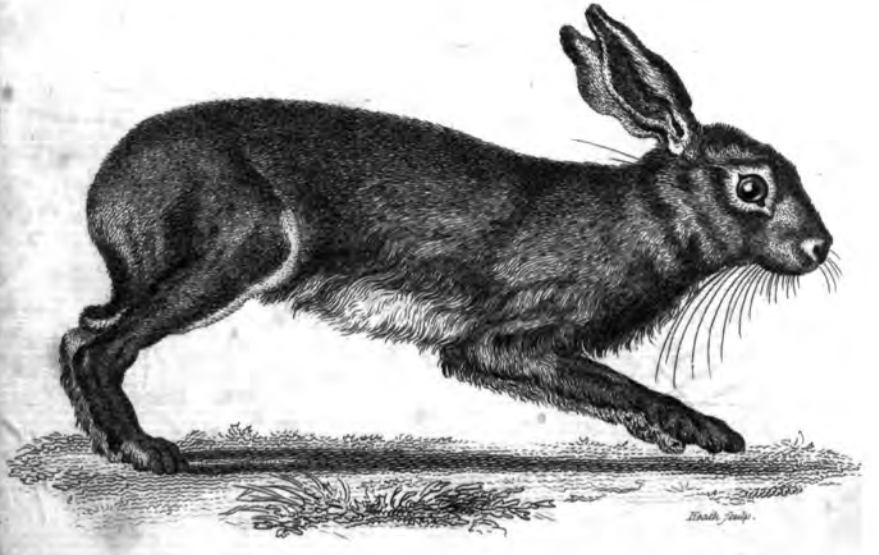
Generic Character.

Dentes Primores utrinque duo; superiores duplicati, interioribus minoribus.	*Front-teeth* two both above and below: the upper pair duplicate; two small interior ones standing behind the exterior.

THIS genus, when considered with anatomical exactness, exhibits particularities of structure, deviating somewhat from that of the *Glires*, and making an indistinct approach to the *Pecora* or Ruminants. It has even been supposed that the common hare actually ruminates; an opinion owing not only to the peculiar motions of the mouth, which present an obscure appearance of rumination, but to the structure of the stomach, which is marked as it were into two regions by a particular fold or ridge. Other singularities relative to internal formation may be met with in the works of comparative anatomists.



RABBET.



HARE.

1801. Jan.y 1. London Publish'd by G. Kearsley Fleet Street.

COMMON HARE.

Lepus Timidus. *L. cauda abbreviata, auriculis apice nigris, capite longioribus. Lin. Syst. Nat. Gmel. p. 160.*
Subferruginous-brown short-tailed Hare, with ears longer than the head, and tipped with black.
Lepus. *Gesn. Quadr. 69. Aldr. dig. 247. Raj. Quadr. 204.*
Le Lievre. *Buff. 6. p. 246. pl. 38.*
Common Hare. *Pennant Quadr. 2. p. 98.*

THE Hare is an animal so familiarly known as to supersede the necessity of any very minute description. It is a native not only of every part of Europe, but of almost every part of the old continent. It may perhaps be doubted whether it be an aboriginal native of any part of America.

The favourite residence of the Hare is in rich and somewhat dry and flat grounds, and it is rarely discovered in very hilly or mountainous situations. It feeds principally by night, and remains concealed during the day in its form, beneath some bush, or slight shelter.

The swiftness of this animal is proverbial, and on account of the conformation of its legs, the hinder of which are longer than the fore, it is observed to run to most advantage on slightly ascending ground.

The general length of the Hare is about two feet; the colour a subferruginous grey, with the chin and belly white, the throat and breast ferruginous, and the tips of the ears blackish: the tail is black above, and white below: the feet are covered beneath as well as above with fur; the in-

side of the mouth is also coated with short hair: the upper lip is divided; the eyes are large, yellowish-brown, and are said to be constantly open even during sleep.

The hare is a very prolific animal, generally producing three or four young at a time, and breeding several times in a year. The young require the assistance of the parent but for a short time, and in about three weeks are able to provide for themselves: they do not remove to any great distance from each other, but continue in the same neighbourhood for a considerable time. The Hare feeds on various vegetables, but is observed to prefer those of a milky and succulent quality. It also occasionally feeds on the bark of trees, as well as on the young shoots of various shrubs, &c.

The nature of the soil in which the Hare resides and feeds, is observed to influence in a considerable degree the colour and constitution of the animal. Those which feed in elevated situations are larger and darker than those which reside in the plains.

The Hare is an animal proverbially timid, and flies, if disturbed when feeding, by the slightest alarm; but when seated in its form, will allow itself to be approached so near as to be reached by a stick; seeming to be fascinated as it were by fear, and instead of endeavouring to fly, continues to squat immoveable, with its eyes fixed on its enemy. It is necessary, however, in order to conduct this manœuvre, to approach in a gradual and circling manner.

The Hare, though so nearly allied to the Rabbet as to make the general descriptive distinction not very easy, is yet of different habits and propensities, and never associates with the latter animal. If taken very young, the Hare may be successfully tamed, and in that state shews a considerable degree of attachment to its benefactors, though it continues shy to those whose presence it has not been accustomed to. Mr. White, in his History of Selbourne, relates an instance which happened in that village, of a young leveret suckled and nursed by a Cat, which received it very early under her protection, and continued to guard it with maternal solicitude till it was grown to a considerable size. Mons. Sonnini, in his notes to Buffon's Natural History, assures us that he himself kept a tame Hare, which used generally to repose itself by the fire in winter between two large Angora cats, and was also on terms of equal friendship with a hound. In this state of domesticity the hare, like other quadrupeds, is subject to a prolongation of the teeth, which exceed their proper bounds, unless the animal be furnished with some hard substances on which to exercise them at intervals. This extraordinary prolongation of the teeth, as Dr. Pallas has justly observed, furnishes an irrefragable argument against Mr. Hunter's doctrine with respect to the growth of these organs.

A most singular variety of this animal is sometimes found, which is furnished with rough and slightly branched horns, bearing a considerable

resemblance to those of a roebuck. This particularity, as strange as it is uncommon, seems to imply a kind of indistinct approach in this animal to the order *Pecora*. Accounts of horned hares may be found, not only in the writings of Gesner and Aldrovandus, but of many other naturalists, and there seems to be no reason for doubting the reality of the phænomenon. Dr. Grew, in his *Musæum Regalis Societatis*, mentions a pair of these horns, which were at that time in the collection of the Royal Society, and Mr. Schreber has lately figured a pair in his work on quadrupeds.

The Hare is a short-lived animal, and is supposed rarely to exceed the term of seven or eight years. Its voice, which is scarce ever heard but in the distress of sudden surprise, is a cry not much unlike that of an infant. The Hare is preyed upon by foxes, wolves, eagles, hawks, kites, &c. &c. which, together with the more destructive pursuits of mankind, contribute to thin the number of these animals, which from their prolific nature would otherwise multiply to the most extravagant degree; since, according to Buffon, in some districts appropriated to the pleasures of the chace, not less than four or five hundred have been destroyed in a single day!

It may be proper to add, that in very severe winters, and especially in those of the more northern regions, the hare becomes entirely white, in which state it is liable to be mistaken for the following species.

VARYING HARE.

Lepus Variabilis. *L. cauda abbreviata, excepto auricularum capite breviorum apice nigro hyeme totus albus. Lin. Syst. Nat. Gmel. p.* 161.

Tawny-grey short-tailed Hare (white in winter), with ears shorter than the head, and tipped with black.

Varying Hare. *Pennant Quadr.* 2. *p.* 100.

Lepus variabilis. *Pall. Glir. p.* 1.

THIS species is an inhabitant of the loftiest alpine tracts in the northern regions of the globe; occurring in Norway, Lapland, Russia, Siberia, and Kamtschatka; and in our own island on the Alps of Scotland. The same species is also found to extend to America, appearing in some parts of Canada. In its general appearance it bears an extreme resemblance to the common hare, but is of smaller * size, and has shorter ears and more slender legs. Its colour in summer is a tawny grey, in winter entirely white; except the tips of the ears, which are black: the soles of the feet are also black, but are very thickly covered with a yellowish fur. This animal is observed to confine itself altogether to elevated situations, and never to descend into the plains, or to mix with the common hare †. The change of colour commences in the month

* Dr. Pallas, on the contrary, represents it as larger than the common hare: it, therefore, appears to vary in size in different countries; and the Scottish variety is smaller than the Russian and Siberian.

† Yet, according to Dr. Pallas, a Hybrid variety is sometimes evidently produced between this species and the common hare.

of September, and the grey or summer coat reappears in April; but in the very severe climate of Siberia it continues white all the year round. It has been sometimes found entirely coal-black; a variety which is also known to take place occasionally in the common hare. The varying hare sometimes migrates in order to obtain food in severe seasons. Troops of five or six hundred have been seen to quit in this manner the frozen hills of Siberia, and to descend into the plains and woody districts, from which they again return in spring to the mountains.

AMERICAN HARE.

Lepus Americanus. *L. cauda abbreviata, pedibus posticis corpore dimidio longioribus, auricularum caudæque apicibus nigris. Lin. Syst. Nat. Gmel. p.* 162.

Tawny-grey short-tailed Hare, white beneath, with the hind legs longer than the body, and the ears and tail tipped with grey.

American Hare. *Forst. Phil. Trans. vol. 62. p. 376. Pennant Quadr. 2. p.* 102. *Catesb. app.* 27.

This animal is not much superior in size to a rabbet; measuring about eighteen inches. Its colour nearly resembles that of the common hare, to which it seems much allied; but the fore legs are shorter, and the hind ones longer in proportion. The belly is white; the tail black above and white beneath; the ears tipped with grey, and the legs of a pale ferruginous colour. It is said to inhabit all parts of North America; and

in the more temperate regions retains its colour all the year round, but in the colder parts becomes white in winter, when the fur grows extremely long and silvery; the edges of the ears alone retaining their former colour. It is said to be extremely common at Hudson's Bay, where it is considered as a highly useful article of food. It breeds once or twice a year, producing from five to seven at a time. It is not of a migratory nature, but always continues to haunt the same places, taking occasional refuge under the roots of trees, or in the hollows near their roots.

BAIKAL HARE.

Lepus Tolai. *L. cauda abbreviata, auricularum margine summo nigro. Lin. Syst. Nat. Gmel. p.* 162. *Pall. Glir. p.* 17. *t.* 4. *f.* 2.

Pale-brown short-tailed Hare, with the upper edges of the ears black.

Tolai. *Buff.* 15. *p.* 138.

Baikal Hare. *Pennant Quadr.* 2. *p.* 104.

THIS is a somewhat larger species than the common hare, which it pretty much resembles as to colour and general appearance, but has a longer and smaller head, with a thicker nose in proportion: the tail is longer in proportion than in the rabbet, and shorter than in the common hare, and is black above and white below: the end of the nose and the eyes are bordered with whitish hair, and the upper edges of the ears are black.

the throat * and under parts are white, and the feet yellowish. This animal is an inhabitant of open hilly places in Dauria and Mongolia, and is said to extend as far as Tibet. In the colour of its flesh it agrees with the rabbet, but differs both from that animal and the hare in its manners; neither burrowing in the ground, like the former, nor running far when pursued, like the latter; but instantly taking refuge in the holes of rocks. It is called by the Mongols by the name of Tolai. The fur is said to be very indifferent, and of no esteem as a commercial article.

RABBET.

Lepus Cuniculus. *L. cauda abbreviata subconcolore, auriculis apice atris, cruribus posticis trunco brevioribus. Lin. Syst. Nat. Gmel. p. 163.*

Short-tailed brown Hare, with the tips of the ears black, and the hind legs shorter than the body.

Cuniculus. *Plin. Gesn. Aldr. Raj.*

Le Lapin. *Buff. 6. p. 303. pl. 50, &c.*

Rabbet. *Pennant Quadr. 2. p. 103.*

The Rabbet bears a very strong general resemblance to the Hare, but is considerably smaller, and its fore feet are furnished with sharper and longer claws in proportion; thus enabling it to burrow in the ground, and to form convenient retreats, in which it conceals itself by day, and, like

* Mr. Erxleben describes it with the throat black.

the hare, comes out chiefly by night and during the early part of the morning to feed. Its colour, in the wild state, is a dusky brown, paler or whitish on the under parts, and the tail is black above and white below. In a domestic state the animal varies into black, black-and-white, silver-grey, perfectly white, &c. &c.

The Rabbet is a native of most of the temperate and warmer parts of the old continent, but is not found in the northern regions, and is not originally a native of Britain, but was introduced from other countries. Its general residence is in dry, chalky, or gravelly soils, in which it can conveniently burrow. It is so prolific an animal that it has been known to breed seven times in a year, and to produce no less than eight young each time. It is, therefore, not surprising that in some countries it has been considered as a kind of calamity, and that various arts of extirpation have been practised against it.

The difference between the Rabbet and the Hare, though known from daily habit and inspection, is yet by no means easily described in words; and it is a curious fact, that the attempts at a specific character by Linnæus, in the earlier editions of the Systema Naturæ, are remarkable for their want of precision. In the second edition of that work he thus distinguishes the Rabbet: *Lepus cauda abrupta, pupillis rubris. Hare with abrupt tail, and red pupils.* Red eyes are, however, only seen occasionally in domestic rabbets of a perfectly white colour. In the twelfth

edition of the Systema Naturæ he attempts to distinguish the Rabbet thus: *L. cauda abbreviata, auriculis denudatis. Hare with abbreviated tail, and naked ears.* But, as Mr. Barrington, whose remarks on this subject may be found in the Philosophical Transactions, has well observed, this latter distinction will be found equally to fail.

The criterion proposed by Mr. Barrington is the proportional length of the hind legs compared with those of the hare; for "if the hind legs of an European Hare are measured from the uppermost joint to the toe, the number of inches will turn out to be just half the length of the back from the rump to the mouth, the tail not being included. The hind legs of the Rabbet being measured in the same manner, and compared with the back, are not much more than one third." Mr. B. adds, that the fore legs of the Rabbet are also shorter than those of the hare. Mr. Barrington's criterion, as the reader will observe by turning to the specific character, has been adopted by modern naturalists.

The strange variety, or rather, if such really existed, distinct species, figured in Mr. Pennant's Synopsis, and repeated in his History of Quadrupeds, under the title of the *Hooded Rabbet*, and taken from a drawing by Edwards, in the British Museum, appears such an outrageous violation of probability as to justify our supposing it, with Dr. Pallas, to be in reality no other than an Angora Rabbet, in the state in which it sometimes appears when casting its fur, which, as Daubenton

has observed, becomes clotted and tangled here and there, as in a specimen figured in Buffon, where a mass of the fur hangs down on one side in such a manner as to resemble an additional leg. Edwards's drawing above mentioned is called, in the memorandum annexed to it, *A Rabbet from Moscovy*, and is described as follows:

"This Rabbit is about the bigness of our largest tame Rabbits in England. It has a double skin all over the back, so that it can roll itself up in a round form, putting its head under the upper skin, and its feet into a pouch under the throat. It has also a flap of thick wool which it places its feet upon when it sits. It has a small hole in the skin on the back, which gives light to the eye when the head is under the skin. It was shewn to the Royal Society of London in the year 1736, and acknowledged to be natural."

In the same volume of drawings is a figure of the skin itself, which is evidently no other than the ragged spoil of some long-haired Rabbet; the head and feet in the preceding figure (which represents the animal in its supposed complete state) being evidently added by Edwards and coloured brown, like those of a common Rabbet, though the enveloping skin itself is white.

BRASILIAN HARE.

Lepus Brasiliensis. *L. auritus, collari albo, cauda nulla. Lin. Syst. Nat. Gmel. p.* 164. *Pall. Glir. p.* 30.
Tailless brown Hare, white beneath, with a white collar round the neck.
Cuniculus Brasiliensis Tapeti. *Marcgr. bras.* 223.
Brasilian Hare. *Pennant Quadr.* 2. *p.* 107.

THE Brasilian Hare is nearly of the same size as the common hare: it is also similar in colour, but of a somewhat darker cast: the chin and under parts are white; the face reddish, and a white ring surrounds the neck; the ears are very large; the eyes black; and the tail is entirely wanting. This animal is said to inhabit the woods of Brasil, and is esteemed as an article of food. The white ring round the neck is not found to be an universal character, but is sometimes wanting. Its native name among the Brasilians is *Tapeti*, and among the Mexicans *Citli*.

CAPE HARE.

Lepus Capensis. *L. cauda longitudine capitis, pedibus rubris. Lin. Syst. Nat. Gmel. p.* 164.
Brown Hare, with reddish legs, and tail the length of the head.
Cape Hare. *Pennant Quadr.* 2. *p.* 105.

THE Cape Hare is about the size of a Rabbet, and is a native of the northern parts above the Cape of Good Hope. Its colour on the upper parts is similar to that of a common Hare, but the cheeks and sides are cinereous, and the under parts and legs ferruginous: the tail is bushy, of a pale ferruginous colour, and carried in an upright direction: the ears are long, broad in the middle, naked, and rose-coloured on the outside and covered with short ash-coloured hair within. It is called about the Cape by the name of Mountain Hare, inhabiting only rocky mountainous regions, and running, when disturbed, into the fissures of the rocks.

VISCACCIA.

Lepus Viscaccia. *L. cauda elongata setosa. Lin. Syst. Nat. Gmel. p.* 160.
Brownish Hare, with long bristly tail.
Vischacha. *Nieremb. Hist. Nat. p.* 161.
Viscaccia. *Pennant Quadr.* 2. *p.* 106.

THIS species is said to have the general appearance of a Rabbet, but has a long bushy and

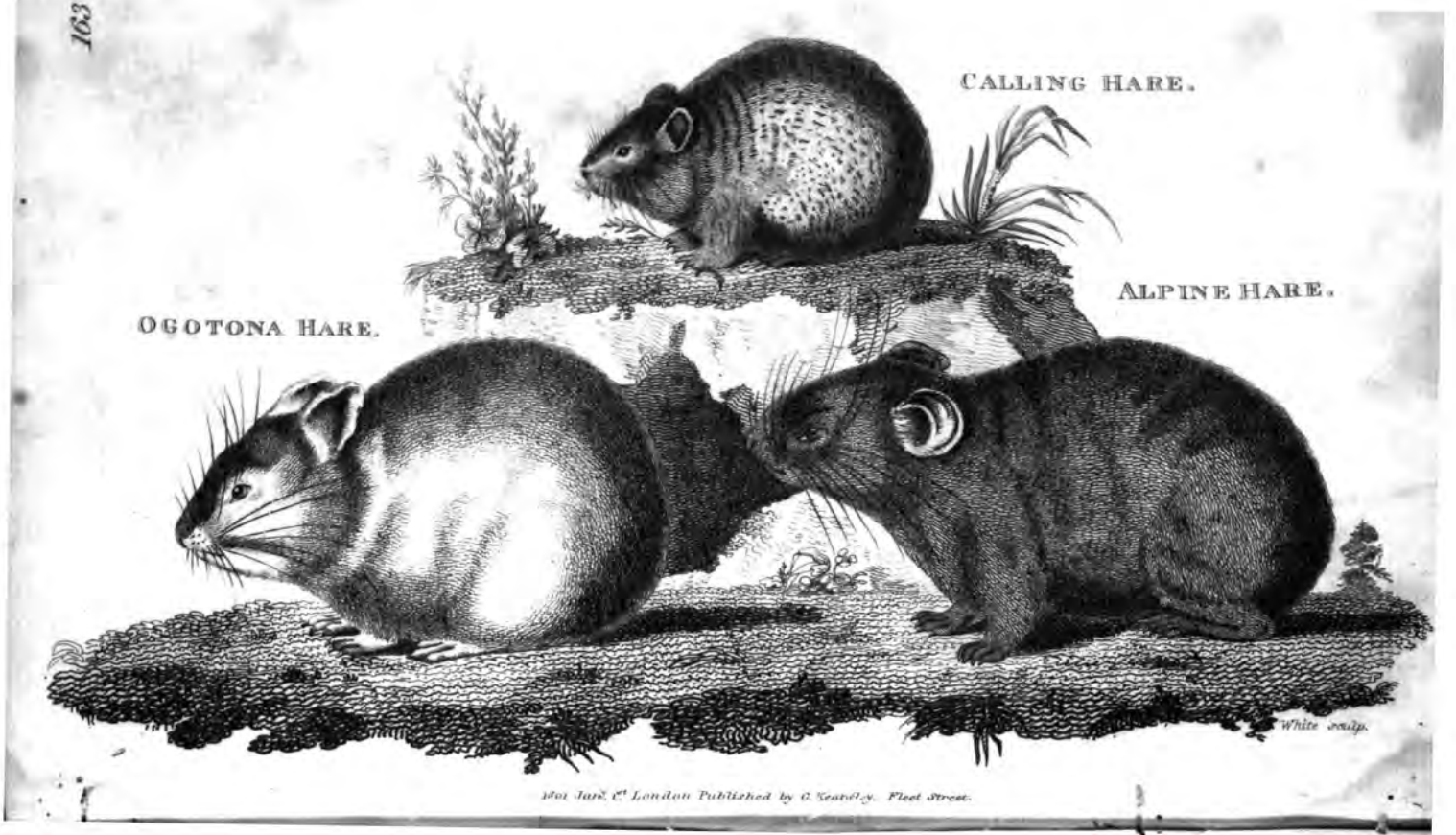
bristly tail, like that of a fox, which the animal also resembles in colour: the fur on all parts, except the tail, is soft, and is used by the Peruvians in the manufacture of hats: it was also used by the ancient Peruvians for the fabric of garments, worn only by persons of distinction. In its manners this animal resembles the rabbet, burrowing under ground, and forming a double mansion, in the upper of which it deposits its provisions, and sleeps in the other. It appears chiefly by night, and is said to defend itself when attacked by striking with its tail.

ALPINE HARE.

Lepus Alpinus. *L. ecaudatus rufescens, auriculis rotundatis plantisque fuscis. Lin. Syst. Nat. Gmel. p.* 165. *Pall. Glir. p.* 45. *t.* 2.

Tailless ferruginous Hare, with rounded ears, and brownish feet. Alpine Hare. *Pennant Quadr.* 2. *p.* 107.

This is a very different species from the Alpine Hare described by Mr. Pennant in the *British Zoology*, which is no other than the *Varying Hare*. The Alpine Hare is a far smaller animal, scarce exceeding a Guinea-Pig (Cavia Cobaya) in size, and measuring only nine inches in length. Its colour is a bright ferruginous grey, paler beneath: the head is long, and the ears short, broad, and rounded. It appears to have been first described by Dr. Pallas, who informs us that it is a native of the Altaic mountains, and extends to the Lake


CALLING HARE.
ALPINE HARE.
OGOTONA HARE.
White sculp.
1801 June 1st London Published by G. Kearsley. Fleet Street.

Baikal, and even to Kamtschatka, inhabiting rough, woody tracts amidst rocks and cataracts, and forming burrows beneath the rocks, or inhabiting the natural fissures, and dwelling sometimes singly, and sometimes two or three together. They are also said to be occasionally found in the hollows of large trees, which have been thrown down by the violence of storms in those lofty regions. In general they confine themselves to their holes in bright weather, coming out only in the evening and during the night; but in dull weather are frequently seen in the day-time, running about among the rocks, and frequently uttering a sort of whistle or chirping sound, not unlike that of a sparrow. In their manners they greatly resemble some of the Marmots or Hamsters, preparing, during the autumn, a plentiful assortment of the finest herbs and grasses, which they collect in company, and after drying with great care in the sun, dispose into heaps of very considerable size, for their winter support, and which may always be distinguished, even through the deep snow, having the appearance of so many hay-ricks in miniature, and being often several feet in height and breadth. These little ricks, raised by their industrious labours, are often found of great service to the adventurous hunters of Sables, whose horses would perish for want, were it not for the supplies which they thus occasionally discover. The Alpine Hare varies in size according to the different regions in which it

is found, being largest about the Altaic mountains, and smaller about Lake Baikal, &c.

OGOTONA HARE.

Lepus Ogotona. *L. ecaudatus griseo-pallidus, auriculis ovalibus subacutis concoloribus. Lin. Syst. Nat. Gmel. p. 166. Pall. Glir. p. 59. t. 3.*

Tailless pale-brown Hare, with oval subacute ears of the same colour.

Ogotona Hare. *Pennant Quadr. 2. p. 109.*

This animal, says Dr. Pallas, is called by the Mongolians by the name of Ogotona, and is an inhabitant of rocky mountains, or sandy plains, burrowing under the soil, or concealing itself under heaps of stones, and forming a soft nest at no great depth from the surface. It wanders about chiefly by night, and sometimes appears by day, especially in cloudy weather. In autumn it collects heaps of various vegetables for its winter food, in the same manner as the Alpine hare, before described, disposing them into neat hemispherical heaps of about a foot in diameter. These heaps are prepared in the month of September, and are entirely consumed by the end of winter.

The Ogotona Hare is about six inches or somewhat more in length, and is of a pale brown colour above, and white beneath: on the nose is a yellowish spot, and the outsides of the limbs

and space about the rump is of the same colour. It is entirely destitute of a tail.

CALLING HARE.

Lepus Pusillus. *L. ecaudatus, fusco griseoque mixtus, auriculis subtriangulis, albo marginatis. Lin. Syst. Nat. Gmel. p.* 164. *Pall. Glir. p.* 31. *t.* 1.

Tailless grey-brown Hare, with subtriangular ears edged with white.

Calling Hare. *Pennant Quadr.* 2. *p.* 111.

In its form this species extremely resembles the Ogotona hare, but is smaller, measuring near six inches, but weighing only from three ounces and a quarter to four and half, and in winter two and a half. The head is somewhat longer than is usual in this genus, and thickly covered with fur even to the tip of the nose: the ears are large and rounded; the legs very short; the feet furred beneath; and the fur on the whole animal is very soft, long, smooth, and of a brownish lead-colour, with the hairs tipped with black: on the sides of the body a yellowish tinge prevails. It is an inhabitant of the south-east parts of *Russia*, and about all the ridge of hills spreading southward from the *Uralian* chain; as well as about the *Irtish*, and the west part of the *Altaic* chain. It is an animal of a solitary disposition, and is very rarely to be seen, even in places it most frequents. It commonly chuses its residence in some dry gentle declivity, where the turf is firm and covered with bushes,

and is therefore mostly found on the western side of hills, where it forms an obliquely descending burrow, the entrance of which is scarcely more than two inches in diameter. The animal generally betrays its place of residence by its voice, which is heard after sunset and early in the morning, and much resembles that of a quail; and is repeated at intervals, three, or four, or six times: it is heard to a surprising distance, considering the small size of the animal, and that there is nothing peculiar in the structure of its organs which can account for so powerful a tone. In cloudy weather this note is heard by day as well as by night, and is commonly mistaken by the country people for that of some bird.

These little animals grow tame almost as soon as caught, and in the course of a day become quite familiar; being of an extremely gentle disposition: they sleep but little, and that with open eyes, like the common hare: they generally sit with body drawn up, as in the figure, but when sleeping, they stretch themselves out with their belly on the ground and their ears pressed close to the head. The animal, when sitting in its general or contracted form, just fills the hollow of the hand. Its pace is a kind of leaping motion, but not very quick; nor does it run well, on account of the shortness of the legs. It may be fed during a state of captivity, on the leaves of various shrubs and plants. It produces five or six young, which are at first of a blackish colour, and blind and naked; but on

the eighth day begin to be furred, to see, and to creep about. This species is not observed to undergo any change of colour during the winter.

MINUTE HARE.

Lepus Minimus. *L. cauda abbreviata, auriculis pilosis concoloribus. Lin. Syst. Nat. Gmel. p. 163.*

Short-tailed brown long-nosed Hare, with small, hairy, pointed ears.

Cuy Hare. *Pennant Quadr. 2. p. 106.*

This is by far the smallest of the whole genus, scarce exceeding the meadow mouse *(Mus arvalis)* in size. It is a native of *Chili,* where it is said to be much esteemed as a delicate food, and is often kept in a domestic state. The body is of a conoid shape, the ears small, pointed, and covered with hair: the nose long; the tail so short as to be scarce visible. This animal varies in colour (at least when in a domestic state), being either brown, white, or spotted. It produces about six or eight young at a time, and is said to breed almost every month. No figure of this animal appears to have yet been given, nor is its description by Molina and others quite so full and circumstantial as might be wished. It is said to be called in *Chili* by the name of *Cuy.*

HYRAX. HYRAX.

Generic Character.

Dentes Primores superiores duo, lati, distantes.

Inferiores quatuor, contigui, lato-plani, bis crenati.

Molares magni, ubique quatuor.

Palmæ digitis quatuor.

Plantæ digitis tribus.

Cauda nulla.

Claviculæ nullæ.

Front-teeth in the upper jaw two, broad, somewhat distant.

In the lower jaw four, broad, flat, twice crenated.

Grinders large, four on each side in both jaws.

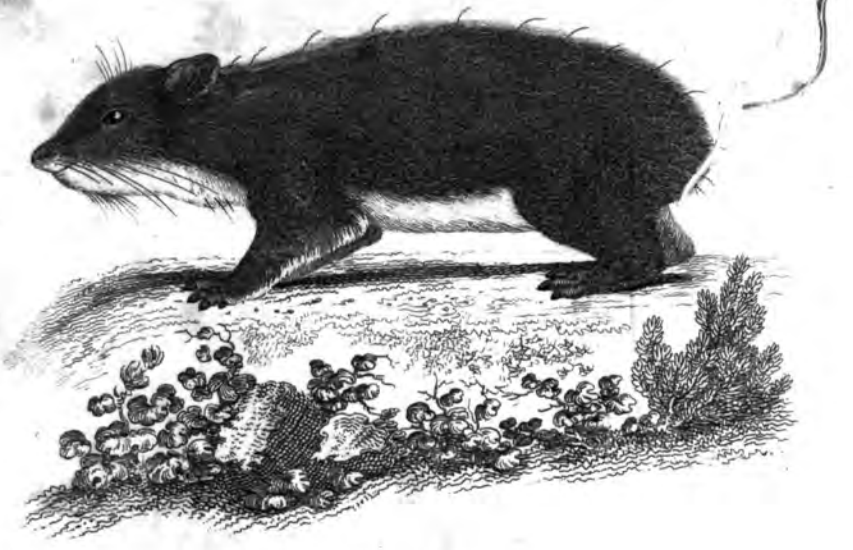
Fore-feet with four toes.

Hind-feet with three toes.

Tail none.

Clavicles none.

THE genus Hyrax is distinguished from all the rest of the Glires by the remarkable circumstance of having four teeth in the lower jaw instead of two: these lower teeth are also of a different structure from the upper, being broad, short, and crenated or denticulated at the top: the upper teeth in this genus are also less sharp or pointed than in the rest of the Glires. In other particulars the genus Hyrax seems most nearly allied to that of Cavia.



SYRIAN HYRAX.

CAPE HYRAX.

1800 Jan.y 1.st London Published by G.Kearsley. Fleet Street.

CAPE HYRAX.

Hyrax Capensis. *H. palmarum unguibus planis, plantarum unico subulato. Lin. Syst. Nat. Gmel. p.* 166.

Grey-brown Hyrax, paler beneath, with flat nails on the fore feet, and a single sharp curved claw on the hind feet.

Cavia Capensis. *Pall. misc.* 34. *t.* 3. *spicil.* 2. *p.* 22. *t.* 2.

Marmotte du Cap de Bonne Esperance. *Buff. Suppl.* 3. *p.* 177. *pl.* 29.

Cape Cavy. *Pennant Quadr.* 2. *p.* 96.

This is an animal of which the natural history and manners have but lately been well understood. It is a native of mountainous situations about the Cape of Good Hope; residing in the hollows of rocks, and leaping with great agility about the prominences of the irregular regions it frequents, though its general or walking pace is not remarkably quick. Its size is nearly that of a rabbet, and in colour it much resembles that animal, but is whitish beneath. It is of a thick form, with short limbs, of which the hinder are longer than the fore, and is perfectly destitute of a tail. The head is rather small; the nose divided by a furrow; the ears short and rounded; the eyes large and black; the fore feet divided into four lobes or toes of a soft or pulpy nature, and furnished with flattish, rounded nails: the hind feet are of similar structure, but have only three lobes, of which the interior is furnished with a sharp crooked claw, while the others have nails similar to those on the fore feet.

This animal is said to be known at the Cape by the name of *rock badger*, but Mr. Allamand observes, that this is an improper name, since the structure of its feet evidently shews that it has no power of digging or burrowing. It is a diurnal animal, and by night retires into the cavities of rocks, &c.

The first figure of this species, published by Dr. Pallas in his *Spicilegia Zoologica*, and from thence copied into the third supplemental volume of the Count de Buffon's Natural History, was executed from a very indifferent drawing, and exhibits the animal beyond measure gross and corpulent. More expressive representations have since been given, and from one of these the figure in the present work is copied.

This animal appears to be easily tamed, and in that state is observed to be remarkably cleanly, and of a lively and active disposition; leaping almost as readily and with as much security as a cat. This is contrary to the character given of the animal from the specimen represented by Dr. Pallas and others; but the individual then described appears to have lost a part of its natural habits from the confinement in which it was kept, and the manner in which it was fed; and consequently misled the describers of the day into a wrong idea of its nature and manners; and this, among many other instances, may serve to shew how little dependence is to be placed on descriptions drawn up from an individual specimen, transported from its native country into a widely

different climate, and having no power of exerting with freedom its natural habits and propensities.

The Cape Hyrax feeds on vegetables only, and is said to prepare a kind of nest or bed of dried leaves, grasses, &c. in the cavities in which it resides. Its voice is a shrill repeated squeak.

SYRIAN HYRAX.

Hyrax Syriacus. *H. plantis tridactylis, unguibus omnibus subæqualibus. Schreb. saeughth. p. 923.*
Rufous-grey Hyrax, white beneath, with tridactyle feet and nearly equal claws.
Ashkoko. *Bruce Trav. append. p. 139. pl. 23.*
Bristly Cavy. *Pennant Quadr. 2. p. 92.*

This species seems to have been first clearly and fully described by Mr. Bruce, in the appendix to his celebrated Abyssinian Travels. If the description appears in some parts rather too minute, let it be considered, that Mr. B. was treating of an animal almost unknown to European naturalists, and which, in consequence, seemed to demand a peculiar degree of exactness.

"This curious animal," says Mr. Bruce, "is found in Ethiopia, in the caverns of the rocks, or under the great stones in the Mountain of the Sun, behind the queen's palace at Koscam. It is also frequent in the deep caverns in the rock in many other parts of Abyssinia. It does not burrow, or make holes, as the rat and rabbet, Nature

having interdicted him this practice by furnishing him with feet, the toes of which are perfectly round, and of a soft, pulpy, tender substance; the fleshy parts of the toes project beyond the nails, which are rather broad than sharp, much similar to a man's nails ill grown, and these appear rather given him for the defence of his soft toes, than for any active use in digging, to which they are by no means adapted.

"His hind foot is long and narrow, divided with two deep wrinkles, or clefts, in the middle, drawn across the centre, on each side of which the flesh rises with considerable protuberancy, and it is terminated by three claws; the middle one is the longest. The fore foot has four toes, three disposed in the same proportion as the hind foot; the fourth, the largest of the whole, is placed lower down on the side of the foot, so that the top of it arrives no farther than the bottom of the toe next to it. The sole of the foot is divided in the centre by deep clefts, like the other, and this cleft reaches down to the heel, which it nearly divides. The whole of the fore foot is very thick, fleshy, and soft, and of a deep black colour, altogether void of hair, though the back or upper part of it is thick-covered like the rest of its body, down to where the toes divide, there the hair ends, so that these long toes very much resemble the fingers of a man.

"In the place of holes, it seems to delight in less close, or more airy places, in the mouths of caves, or clefts in the rock, or where one pro-

jecting, and being open before, affords a long retreat under it, without fear that this can ever be removed by the strength or operations of man. The Ashkoko are gregarious, and frequently several dozens of them sit upon the great stones at the mouth of caves, and warm themselves in the sun, or even come out and enjoy the freshness of the summer evening. They do not stand upright upon their feet, but seem to steal along as in fear, their belly being nearly close to the ground, advancing a few steps at a time, and then pausing. They have something very mild, feeble, and timid, in their deportment; are gentle and easily tamed, though, when roughly handled at the first, they bite very severely.

"This animal is found plentifully on Mount Libanus. I have seen him also among the rocks at the Pharan Promontorium, or Cape Mahomet, which divides the Elanitic from the Heroopolitic Gulf, or Gulf of Suez. In all places they seem to be the same; if there is any difference it is in favour of the size and fatness which those in the Mountain of the Sun seem to enjoy, above the others. What is his food I cannot determine with any degree of certainty. When in my possession, he ate bread and milk, and seemed to be rather a moderate than voracious feeder. I suppose he lives on grain, fruit, and roots. He seemed too timid and backward in his own nature to feed upon living food, or catch it by hunting.

"The total length of this animal, as he sits, from the point of his nose to the extremity of his

body is seventeen inches and a quarter. The length of his snout, from the extremity of the nose to the occiput, is three inches and three eighths. His upper jaw is longer than his under; his nose stretches half an inch beyond his chin. The aperture of the mouth, when he keeps it close, in profile, is little more than an inch. The circumference of his snout around both his jaws is three inches and three eighths; and round his head, just above his ears, eight inches and five eighths: the circumference of his neck is eight inches and a half, and its length one inch and a half. He seems more willing to turn his body altogether than his neck alone. The circumference of his body, measured behind his fore legs, is nine inches and three quarters, and that of his body, where greatest, eleven inches and three eighths: the length of his fore leg and toe is three inches and a half. The length of his hind thigh is three inches and one eighth, and the length of his hind leg to the toe taken together, is two feet two inches: the length of the fore foot is one inch and three eighths; the length of the middle toe six lines, and its breadth six lines also. The distance between the point of the nose and the first corner of the eye is one inch and five eighths; and the length of his eye, from one angle to the other, four lines. The difference from the fore angle of his eye to the root of his ear is one inch and three lines, and the opening of his eye two lines and a half. His upper lip is covered with a pencil of strong hairs

for mustachoes, the length of which are three inches and five eighths, and those of his eyebrows two inches and two eighths. He has no tail, and gives at first sight the idea of a rat, rather than of any other creature. His colour is a grey mixed with a reddish brown, perfectly like the wild or warren rabbet. His belly is white, from the point of the lower jaw, to where his tail would begin, if that he had one. All over his body he has scattered hairs, strong and polished like his mustachoes; these are for the most part two inches and a quarter in length. His ears are round, not pointed. He makes no noise that ever I heard, but certainly chews the cud*. To discover this was the principal reason of my keeping him alive: those with whom he is acquainted he follows with great assiduity. The arrival of any living creature, even of a bird, makes him seek for a hiding-place; and I shut him up in a cage with a small chicken, after omitting to feed him a whole day: the next morning the chicken was unhurt, though the Ashkoko came to me with great signs of having suffered with hunger. I likewise made a second experiment, by inclosing two smaller birds with him for the space of several weeks: neither were these hurt, though both of them fed, without impediment, of the meat that was thrown into his cage, and the smallest of

* This particular seems very doubtful, and may probably be owing to the peculiar motions of the mouth, resembling those of the hare, which has also been supposed by some to ruminate.

these, a titmouse, seemed to be advancing in a sort of familiarity with him, though I never saw it venture to perch upon him: yet it would eat frequently, and, at the same time, of the food upon which the Ashkoko was feeding; and in this consisted chiefly the familiarity I speak of, for the Ashkoko himself never shewed any alteration of behaviour upon the presence of the bird, but treated it with a kind of absolute indifference. The cage indeed was large, and the birds having a perch to sit upon in the upper part of it, they did not annoy one another.

"In Amhara this animal is called Ashkoko, which I apprehend is derived from the singularity of those long herinaceous hairs, which, like small thorns, grow about his back, and which in Amhara are called Ashok. In Arabia and Syria he is called Israel's Sheep, or Gannim Israel, for what reason I know not, unless it is chiefly from his frequenting the rocks of Horeb and Sinai, where the children of Israel made their forty years' peregrination; perhaps this name obtains only among the Arabians. I apprehend he is known by that of Saphan in the Hebrew, and is the animal erroneously called by our translators Cuniculus, the rabbet or coney."

HUDSON'S BAY HYRAX.

Hyrax Hudsonius. *H. cinereo-fuscus pilis apice albidis, palmis plantisque tetradactylis.*

Cinereous-brown Hyrax, with the hair whitish at the tips, and four toes on all the feet.

Tailless Marmot. *Pennant Quadr.* 2. *p.* 137.

THIS was first described by Mr. Pennant, and is in the Leverian Museum. Its colour is a cinereous brown, with the ends of the hairs white. It is a native of Hudson's Bay. Its size is nearly that of a common Marmot: the two upper teeth are moderately large, and shaped like those of the Cape Hyrax: the four lower are very strong, rather long than broad, and are very abruptly truncated, without any appearance of denticulations: the feet are tetradactylous; of a similar form to those of the Cape Hyrax, but have rounded claws on all the toes. Nothing particular is known of the manners or natural history of this species.

To be added to the Genus Cavia.—Page 16.

PATAGONIAN CAVY.

Cavia Patachonica. *C. subcaudata grisco-ferruginea, subtùs albida, macula femorali utrinque alba, uropygio nigro.*
Ferruginous-grey Cavy, whitish beneath, with extremely short naked tail, large white patch on each thigh, and black rump.
Patagonian Cavy. *Pennant Quadr. 2. p. 91.*
Hare. *Narborough's Voy. to Magell. p. 33.*

This remarkable species, of which a fine specimen occurs in the Leverian Museum, is a native of Patagonia, where it is said to be by no means uncommon. In size it considerably exceeds a Hare, and, according to Mr. Pennant, has been sometimes found to weigh more than twenty-six pounds. Its colour on the upper parts resembles that of a Hare; but the under parts are whitish, the breast and sides tinged with ferruginous: on each thigh is a large oval white patch, and the rump or region round the tail is black: the ears are long, rather broad, and sharp-pointed. On each side the nose is a tuft of short soft hair, exclusive of the long vibrissæ or whiskers. The legs are long; the claws long, strait, sharp, and black: they are four in number on the fore feet, and three on the hind. The tail is extremely short, as in the *Aguti*, being a mere naked stump or process. This animal is said to be an excellent article of food, the flesh being very white and delicate. It is called by Sir John Narborough, who seems to have been its first discoverer, by the title of a Hare.

PATAGONIAN CAVY. *from Leverian Museum.*

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